

GOVERNMENT PHYSICAL PLANNING SERVICE

Report on physical planning in the Netherlands

CONDENSED EDITION

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With the covering letter of September 27th 1960 the Minister of Housing and Building, on behalf of the Cabinet, presented a report on physical planning in the Netherlands to the Second Chamber of the States General. A summary of this document follows. This report was compiled in reply to a motion, which was carried in the course of the discussions on the budget for 1958. In this motion the Government was invited to report on the problems of physical planning.

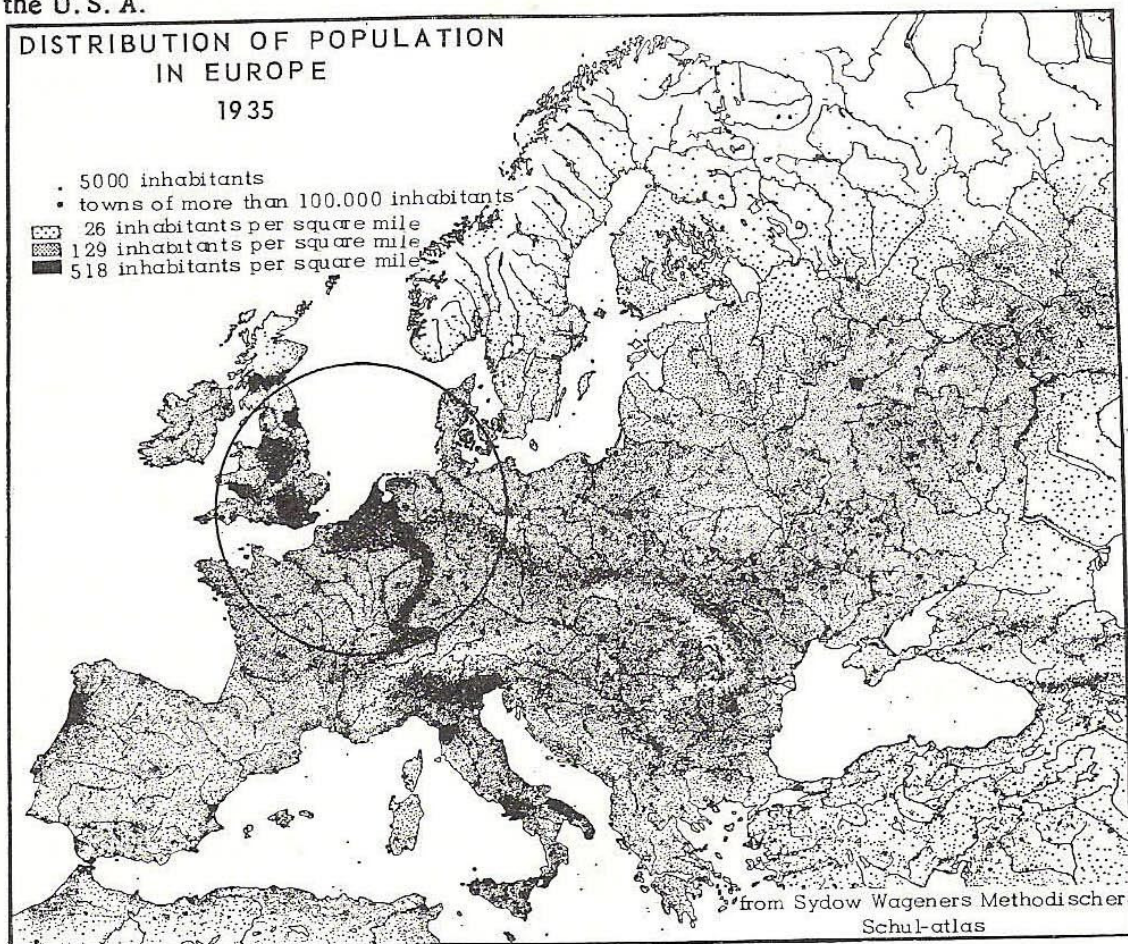
The reports "The West of the Netherlands and the other Provinces" and "The Development of the Western Netherlands", published in the years 1956 and 1957, provided the incentive for this motion. These reports were the result of extensive studies carried out respectively by the Standing Committee, in collaboration with the Central Planning Bureau, and by the Working Committee for the western part of the country. The latter Committee was appointed by the then Minister of Reconstruction and Housing and was composed of representatives of various ministries, of the provincial governments in the West of the Netherlands and of the three large cities. Both reports recommend deliberate Government policy to achieve a more satisfactory distribution of employment opportunities and population over the country.

The present report confines itself to the main features of national physical planning. It does not take into consideration questions of municipal interest, for example urban development, urban improvement and reconstruction. Regional problems only are touched upon. The international aspects are still so uncertain that it is impossible for the time being to deal with the physical planning problems involved.

1. The Netherlands in Western Europe

The basic factor in the development of the Netherlands is her favourable situation on the great traffic routes from the European Continent to the oceans. A good deal of the country owes its very existence to the age-old struggle against the sea, and can survive only by unrelenting defence against the ocean. On the other hand, the sea as a traffic route has for long determined the basis of existence of the Netherlands, and the country's function as a gateway to the most densely populated part of Western Europe is, and will remain, a major element to be considered in all problems of physical planning.

Within a 600 km (373 miles) radius (less than an hour's flight by plane) of the mouth of the Rhine, lives a population of roughly 150 million (see Exhibit 1), equivalent to about 40 % of the total population of Europe ^{*)}, or to 85 % of the population of the U. S. A.



^{*)} Outside U. S. S. R.

Fig. 1

The emergence of a field of gravity of this magnitude in the North sea area is a consequence, not only of the political development of Europe since the Middle Ages, but even more of the economically and geographically favourable transport conditions. Most of Europe's principal minerals - coal, lignite and iron ore - on which a whole system of heavy and other industries is based, lie around the North sea. Owing to the Gulfstream, the North sea ports are ice-free, while on the continent a number of large rivers - the Seine, Scheldt, Meuse, Rhine, Ems, Weser and Elbe - provide good ports of entry for maritime shipping, at short distances from each other, and inland waterways penetrating far into the interior.

In the course of time, this widely ramified natural system of waterways has been improved and extended in various ways. Rivers have been canalised, along the whole, or part, of their courses. Large new canals have been constructed. Cross connections between rivers have thus become available in several places. Further important improvements of the system have been planned; e.g. a connecting link between the Rhine and the Danube, via the Main; and the canalisation of the Upper Rhine and the Moselle.

The Rhine is the main artery in the system of waterways of Western Europe, and thus is rightly called "the highroad of Europe". Where it reaches the sea, its delta also takes in the Scheldt and the Meuse; and the construction of the North sea canal and of the Amsterdam-Rhine canal has virtually created a second Rhine mouth. The Rhine delta, therefore, is the main gateway into Europe, with Rotterdam, Antwerp and Amsterdam as principal ports. These ports attract 31 % of the sea traffic of the European continent. Since the Second World War, the goods traffic of the port of Rotterdam - situated on the Rhine mouth proper - has risen above that of London. Rotterdam is now the second largest port in the world.

The close concentration of industry and population in the whole area around the North sea shows itself in its most striking form in a number of large conurbations. The most extensive of these, on the Continent, is the Rhine-Ruhr region, with a population which approaches in number that of the Netherlands. The main centres in Belgium are Brussels, Antwerp and Ghent, but there is also a high degree of urbanisation in the industrial belt which links Liège, Charleroi and the North of France. The Netherlands has her "Randstad Holland" in the Rhine delta. A large part of the country is situated within its sphere of influence.

The spreading-out of the large conurbations also means that the latter are extending towards each other. It is difficult to predict the physical features which this process might produce in the long run. In the U. S. A., where this phenomenon occurs on a very large scale on the East coast, there is already talk of a single continuous urban belt, stretching between Boston and Washington, about 1000 km (621 miles) in length and containing a population of about 35 million (Exh. 2). In North West Europe, a similar development is not out of the question. It is necessary, in any case, to regard physical planning in the Netherlands as part of a much wider development, which will be accentuated, in all its aspects, in the years to come.

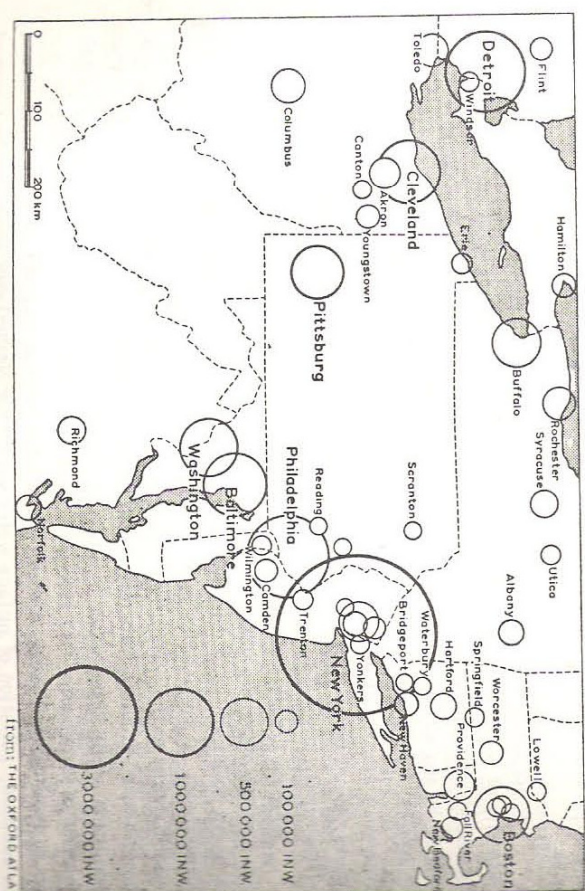
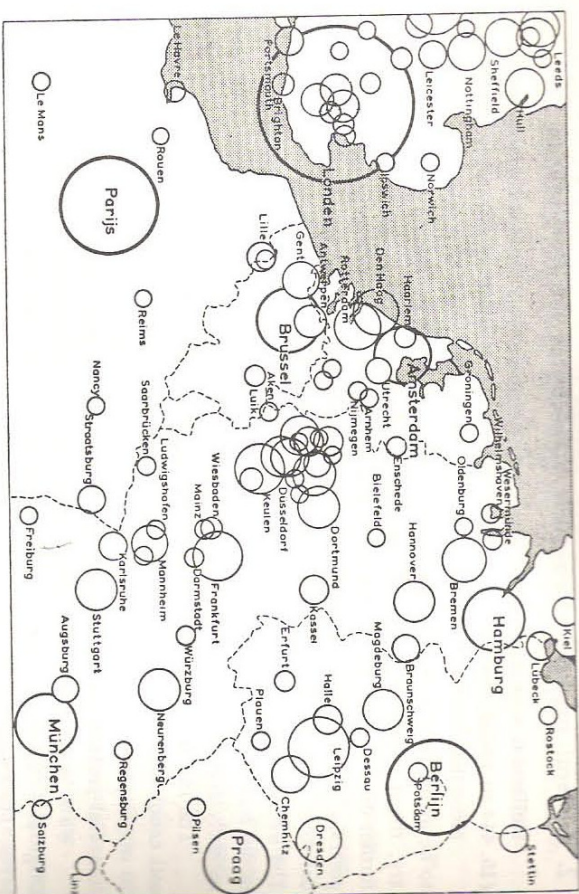


Fig. 2

From the Oxford Atlas

2. General aspects of physical planning in the Netherlands

Holland is a small country. Her total territory covers about 40,000 sq. km. (15,444 sq. miles), of which about 32,500 sq. km. (12,548 sq. miles) consist of land.

More than half of the country is situated on such a low level that this area has to be artificially protected against the water outside. The upkeep and, where necessary, the strengthening of these defences are among the first priorities in planning the further development of the country. The long-term aim is to create, so far as possible, a "closed" coast line, with corresponding shortening of the length of the sea defences. The damming of the Zuiderzee was an important move in this direction. The damming of the estuaries between the New Waterway and the West Scheldt, within the framework of the Delta plan, is well under way. The Dutch Government has recently decided upon the damming of the Lauwers sea also.

The low level of a great part of the country is linked, in many areas, to soft soil conditions. In the Western regions in particular, peat layers to a depth of about 20 m (22 yards) lie over the solid soil. This gives rise to additional technical and financial problems in developing this part of the country.

Water management has always demanded continuous care in the low-lying areas. Originally the main concern was centred on a satisfactory regulation of the water level. Modernisation of agriculture, however, has induced high-lying areas also to make demands on water management. In addition to quantitative demand, moreover, demands of a qualitative kind are becoming increasingly urgent in the whole of the country. This increases the importance of the struggle against silting and water pollution.

For her fresh water supply the Netherlands depends mainly on the Rhine. The quantity of water available from this river, however, is not sufficient to provide for the needs of agriculture, horticulture, industry, drinking-water supply, prevention of silting by sea water, etc. all the year round. Only by the creation of reservoirs, therefore, can proper water management be ensured. The intended fresh water reservoirs are the Yssel lake, and the Zeeland lake which will be created by the Delta works; canalisation of the Lower Rhine and the Lek is designed to ensure a sufficient water supply in the Yssel lake.

Whereas the Netherlands can ensure the necessary distribution of surface water in her own territory, the quality of the water raises more difficult problems. The Rhine is being polluted, to an ever-increasing degree, by urban and industrial waste. The Netherlands is situated on its lower reaches, and thus depends for a great deal on what happens to the river in the upper reaches. From every point of view - agriculture, horticulture, industry, drinking-water supply in large parts of the West - the present condition of the Rhine water is hardly acceptable any more. It is therefore of vital interest to the country that effective regulations should be made - and adhered to - on an international level. Consultations have been in progress for some time already. In addition, pollution of surface water within the Netherlands must also be watched and kept within acceptable limits.

In spite of the difficulties arising from her location and soil conditions - set out briefly in the previous paragraphs - the Netherlands is very densely populated. In fact, the density is highest in the low-lying western region, where the problems of water management, soil condition, etc. are greatest.

This is a further indication that the Rhine delta in particular determines the function of the country as a whole. Intensive land use is therefore one of the salient features of the problem of physical planning in the Netherlands.

Since 1957, the density of population has risen to 350 per sq. km. (906 per sq. mile). This figure is expected to rise further to 365 (945 per sq. mile) in 1980, even when allowance has been made for planned land reclamation.

There are great variations in density according to region. The unequal distribution of population pressure is in fact one of the most important basic data for physical planning. The concentration is highest in the west of the country, but density is very high in the out-lying areas too (233 per sq. km.).

The density figure given above, indeed, understates the pressure on Dutch territory. It is more and more noticeable, especially in the matter of recreation, that the country lies within the direct sphere of influence of the large population concentrations outside its own borders. With increased motorisation, the growing need to spend time in the open air, and rising demand for weekend and holiday cottages, this additional strain on the physical resources of the Netherlands will become even more serious.

3. Regional aspects

For purposes of a regional survey, the territory of the Netherlands has been subdivided into five regions, which for practical reasons consist of groups of provinces. They are: North (Groningen, Friesland, Drenthe); East (Gelderland, Overijssel); West (Noord-Holland, Zuid-Holland, Utrecht); South (Noord-Brabant, Limburg); and South West (Zeeland). Although there is a certain amount of diversity within these regions, each of them is sufficiently typical to be treated as a unit in a general survey.

In reality, the boundaries are of course not as sharply defined as those of the provinces. Practically everywhere the regions merge into one another. There are, moreover, cases where part of a given region also has close links with other regions. This occurs in its most pronounced form in the Delta area, where, apart from Zeeland, parts of the South and West regions (the western part of Noord-Brabant and the southern part of Zuid-Holland respectively) are immediately involved. Such connections should always be kept in mind when measures are drawn up to promote a particular development.

With this proviso, the five regions may be described with the aid of the two tables below.

Table 1. Working population by region and industry sector, in percentages of the total working population of the Netherlands (1950)

Industry sector	North	East	West	South	Southwest	Netherlands
Agriculture	21,7	28,2	24,0	21,3	4,8	100,0
Industry	8,7	19,4	46,5	23,3	2,1	100,0
Trade	11,4	14,0	56,6	15,1	2,9	100,0
Transport	9,3	12,4	62,2	13,7	2,4	100,0
Other services	10,2	15,7	57,3	14,7	2,1	100,0
Percentage of the total population	12,0	17,5	48,0	19,8	2,7	100,0

This table illustrates the preponderance of agriculture in the North and South West, of manufacturing industry in the West, South and East, and of trade, transport and other services in the West. This trend is even more obvious from table 2, which shows the distribution over three industry sectors of the working population in the basic industries.

Table 2. Working population in the basic industries, by region and industry sector in percentages of the total regional working population in the basic industries

Industry sector	North	East	West	South	Southwest
Agriculture	59	44	18	33	58
Industry	28	47	49	59	29
Services	13	9	33	8	13
Total	100	100	100	100	100

Looking at the picture as a whole, it is at once obvious that a distinction must be drawn between the Western part of the country and the areas outside. This distinction is also apparent in the density figures.

Table 3. Surface and population (1-1-1960)

Areas	in sq. miles	Surface percentage of the Netherlands	Population x 1000	Percentage of the Netherlands	Density of population
Randstad	645	5,1	4,172	36,5	2,496
The west of the Netherlands	2613	20,9	5,426	47,5	801
Other provinces	9921	79,1	5,991	52,5	233
Total	12,398	100,0	11,417	100,0	351

In the western part of the country, the shortage of land is the overriding problem. The concentration of industrial, commercial and urban development (Exh. 3) is

TOWNS OF MORE THAN 25000 INHABITANTS AND NUMBER OF INHABITANTS PER SQUARE MILE PER PROVINCE

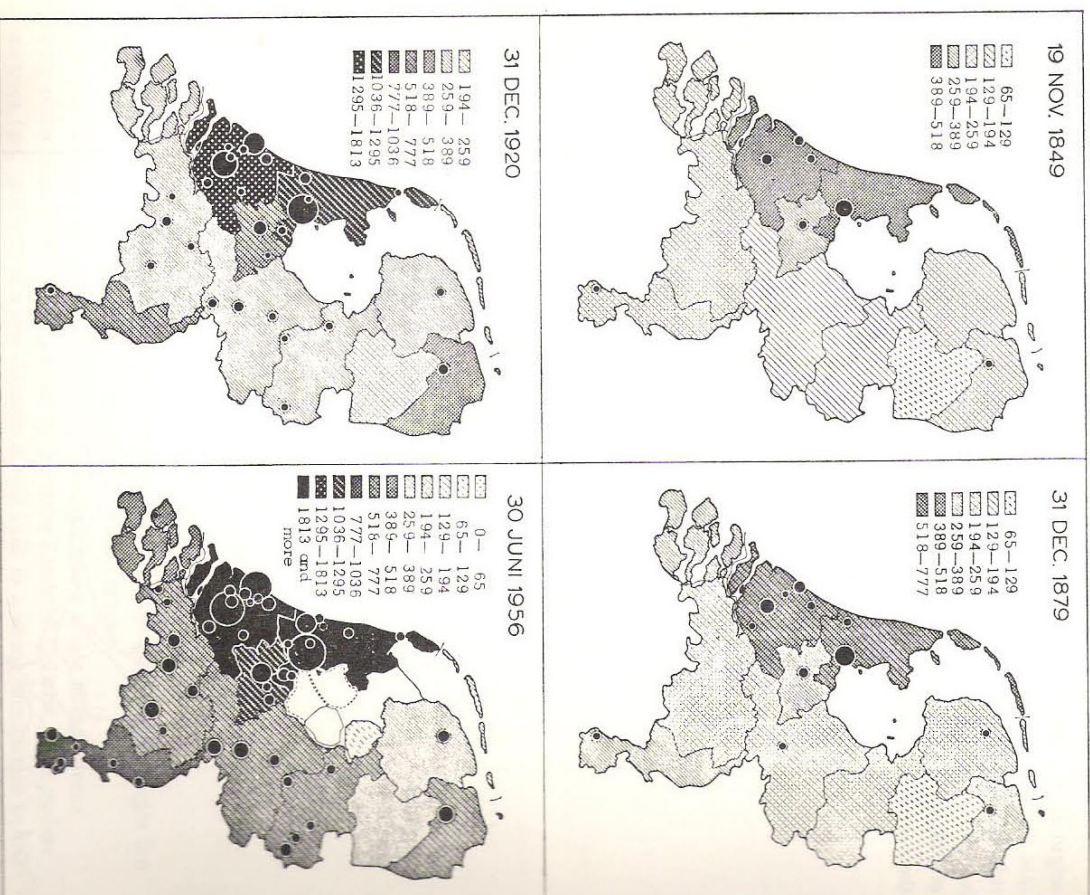


Fig. 3

The surface of the circles is proportionate to the number of inhabitants, 25,000 inhabitants.

Compiled by: Central Bureau of Statistics and the Government Physical Planning Service

accompanied, in this area, by an equally close concentration of highly specialised forms of agriculture (vegetable-growing under glass and bulb-growing). While, moreover, the flow of tourists and trippers from home and abroad also converges mainly on the West. All these activities occur within a very limited space. In general, they can expand only at each other's expense.

The dominating element in this development is the "Randstad Holland". The origin of this ring of towns goes back far into the past. But it is only in modern times that the conglomeration has taken on the features of a connected entity, in which, side by side with the original poles - the two great ports - other centres of gravity have emerged. These are, on the western side, the Government and diplomatic centre of The Hague, and also the agglomeration of Haarlem - Ymond; on the eastern side, the region of Utrecht with the Gooi region, and the Utrecht Ridge; the latter two have

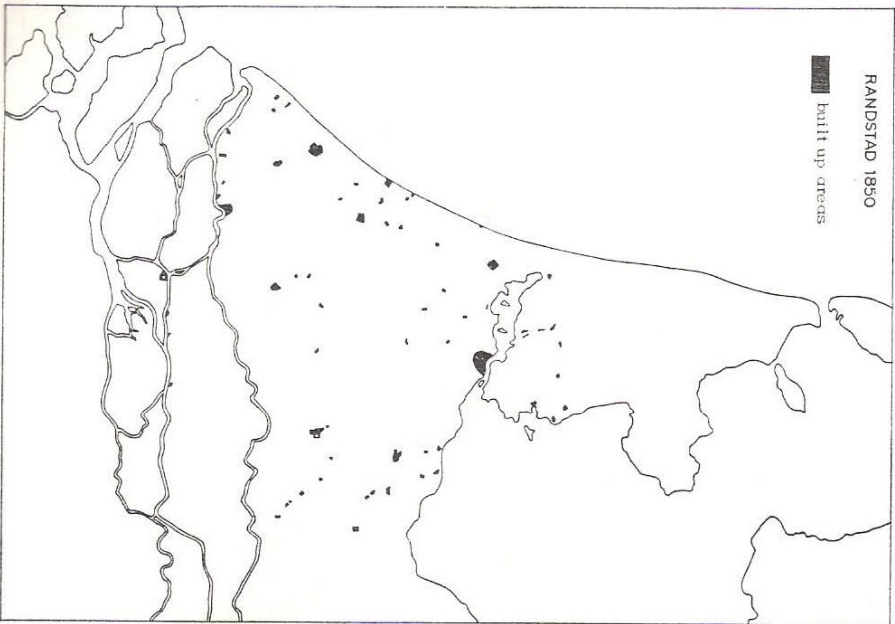


Fig. 4

developed more extensively lately, and a large agglomeration is beginning to take shape here too.

Originally, each of the various towns led a somewhat separate existence within a preponderantly agricultural area (Exh. 4). With increasing development, the gaps be-

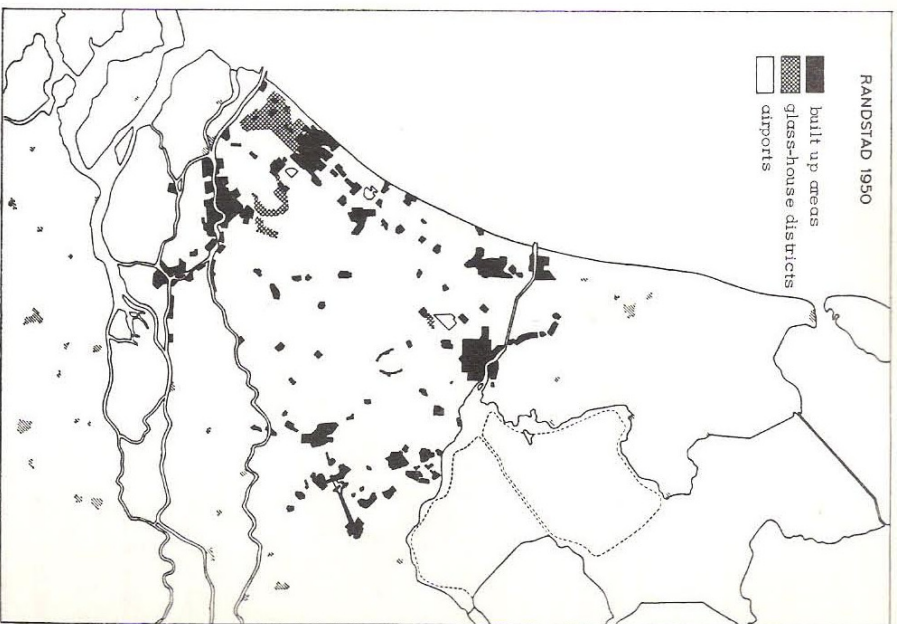


Fig. 5

tween towns contracted, and rapid transport connections by rail or road brought the constituent parts of the urban ring even closer to each other.

Gradually, the ring of towns is beginning to merge into a single homogeneous metropolitan area (Exh. 5), expressed by its name Randstad Holland. The process continues fast, and within a few decades it will lead to a strong domination by the urban element (Exh. 6).

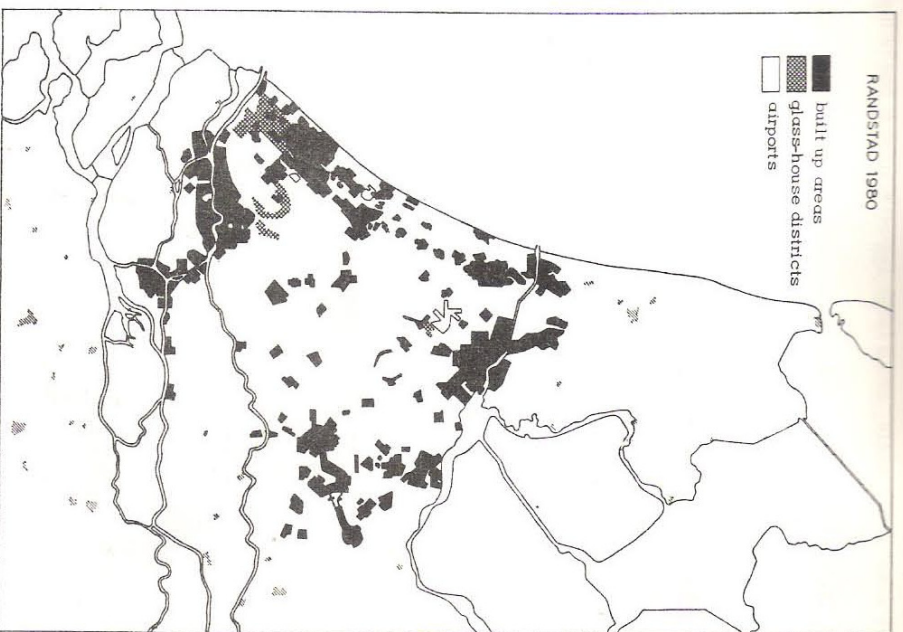


Fig. 6

This development raises problems of great urgency. On the one hand, the national interest requires that the advantages of the West as the site of activities which are particularly suited to this kind of region, should be exploited to the full; on the other hand, the obvious disadvantages of a large concentration of population, i.e. the existing or threatened congestion, should also be kept in mind. The low level of the area, the difficulties of water management, and to some extent, also the danger of air pollution from the proximity of some towns to the sites of heavy industry are further matters which deserve careful consideration.

As regards the Randstad, its open structure - the ring of separate towns around a mainly agricultural central area - is the first item to be considered. It is very fortunate

that a conurbation of over 4 million inhabitants should have developed in this way, as compared with conurbations abroad which cover large uninterrupted built-up areas. It is, however, doubtful whether this advantage can be maintained if the Randstad, in accordance with the forecast of the "Report on the Western Netherlands", should grow to a conurbation of 5.5 million inhabitants in 1980.

Its open structure will then be threatened from two sides.

Firstly, the towns themselves may spread so much that in the foreseeable future the separate agglomerations situated on the urban ring will merge at various points, or that important rural areas will be in danger of being covered by buildings (for example, in the Groot region or on the Utrecht Ridge). Secondly, the settlement of an essentially urban population in a number of scattered small centres might take on such large dimensions that the central area will be completely broken up.

The lack of space on the urban ring is not due to extravagance in the planning of urban development. On the contrary, the built up area in western towns is very concentrated and there is a considerable lack of space for recreation, especially in the town centres and in the 19th century districts. Modern development plans try to improve matters as much as possible, but the lack of space, combined with the high cost of building sites, results in a continuing high building density. Even in towns which so far have remained small, the housing situation is more and more dominated by these factors.

In practically all aspects of the development of the West, allowance must be made for its low level and generally soft soil which make special provisions necessary. This means higher costs for building houses and factories, for construction and maintenance of roads and railways, for construction of coastal defences etc. The cost of motor road construction on unsuitable soil may be as high as fl. 2 million per km. (0.62 mile), as compared with fl. 0.7 million per km. (0.62 mile) on hard soil. In many parts of the West, house construction involves extra costs for foundations which may amount to more than 20 % of the cost of the superstructure. In Noord- and Zuid-Holland, 80 % of all houses have to be built on piles, as against 10 % in the sand provinces, and 20 to 40 % in the other provinces. The cost of public utilities (leveling of sites, sewerage, road building etc.) per unit of dwelling area in western towns is 2 to 3 times as high as in southern or eastern towns.

The low level of the Randstad, moreover, renders this area more vulnerable to special dangers, as does the concentration of population.

In the other provinces of the Netherlands, the relationship between population and employment opportunities still differs from region to region. The East and the South in particular, show a considerable increase of employment capacity. In these regions, an easy labour market is combined with the advantages of favourable location in relation to the Randstad Holland and the surrounding foreign conurbations, hard soil, attractive residential areas etc. The driving force behind the development of these regions is, in particular, the establishment, or expansion, of light industries.

The differences between the regions are also apparent from the designation of "problem areas", made in 1958 by the Minister of Economic Affairs in consultation

with the Council for Physical Planning of the Council of Ministers. The designation is based on the existing or probable disequilibrium between employment opportunities and the population depending on them.

Apart from an area in the north of Noord-Holland, none of these areas is situated in the West. Whereas the whole of the North and South regions had to be designated "problem areas", only limited areas of the East and South regions had to be designated as such; in the East region, some parts of Overijssel adjoining the northern problem area; in the South region, only the circular zone in Noord-Brabant and North Limburg situated around the industrial area of Eindhoven and Helmond. Notwithstanding the contribution which the new industrial policy will be able to make towards a better distribution of population, the present situation is still characterised very much by concentration in the West, and in particular in the Randstad Holland.

4. *Physical planning from the national point of view*

The ultimate purpose of the effort to get a harmonious distribution of population and employment opportunities is to achieve in the general interest, a better distribution of responsibility between the various parts of the country. If the areas outside the Randstad acquire a larger share of the national development, this will contribute to solving their own problems, and simultaneously help to lighten the pressure on the West. In the Randstad it will be possible to make better use of the available space for activities particularly suited to the area. There will also be a greater chance of maintaining satisfactory living and working conditions in the conurbation. The aims, therefore, are not mutually exclusive; on the contrary, they are complementary and reinforce one another.

CHAPTER III - PROSPECTS OF GROWTH AND DISTRIBUTION OF POPULATION

1. *Growth of population*

The growth of population in the Netherlands is a rapid process compared with that in other European countries. Since 1870, the annual rate of increase has never fallen below 1% (average over 10-yearly periods). Net emigration is rather low, the birthrate is relatively high, deathrates are low, infant mortality is very low and the net reproduction rate is high. As a result of these demographic facts, the age structure of the population also differs from that of surrounding countries: the percentage of young people is higher, that of old people lower (Appendix I).

At present, the Dutch population increases by about 140,000 persons per year. According to a recent projection of the Central Bureau of Statistics, the population of 11.5 million in 1960 will have grown to about 14 million in 1980, on the assumption that net emigration remains stable at the present figure of 17,000 p. a. The working population is expected to increase from 4.1 million in 1950 to 5.6 million in 1980 (Appendix II).

2. *Distribution of population and internal migration*

The distribution of the population over the country depends on the distribution of natural growth and on internal migration.

- a. Two important factors influence internal migration:
 - a. the declining working population in agriculture (Exh. 7), which is accompanied by increased urbanisation, and
 - b. greater freedom of choice of location for entrepreneurs in the manufacturing and services industries, thanks mainly to modern developments in transport, supply of energy, telecommunications and the gradual elimination of the differences between town and country.

This tends to open up new areas with numerous workplaces for these industries. It is contrary to present tendencies of development to aim at confining the natural growth of the population within area boundaries. The net balances of migration, therefore, deserve attention from the planning point of view only if they are pointers to serious disturbances of the equilibrium; for example, if they are the result of large losses on the one hand, or of too much concentration on the other.

In typical "expulsion" areas, continuing emigration weakens the productive forces and, for that reason, often hinders well-devised reorganisation; it also tends to cause an unbalanced age structure. In the initial stages of drastic structural changes in the labour market, transport of labour over great distances may become onerous. The Minister of Economic Affairs has decided to make a thorough investigation of this

DEVELOPMENT OF THE INDUSTRIAL LABOUR FORCE IN THE NETHERLANDS SINCE 1899

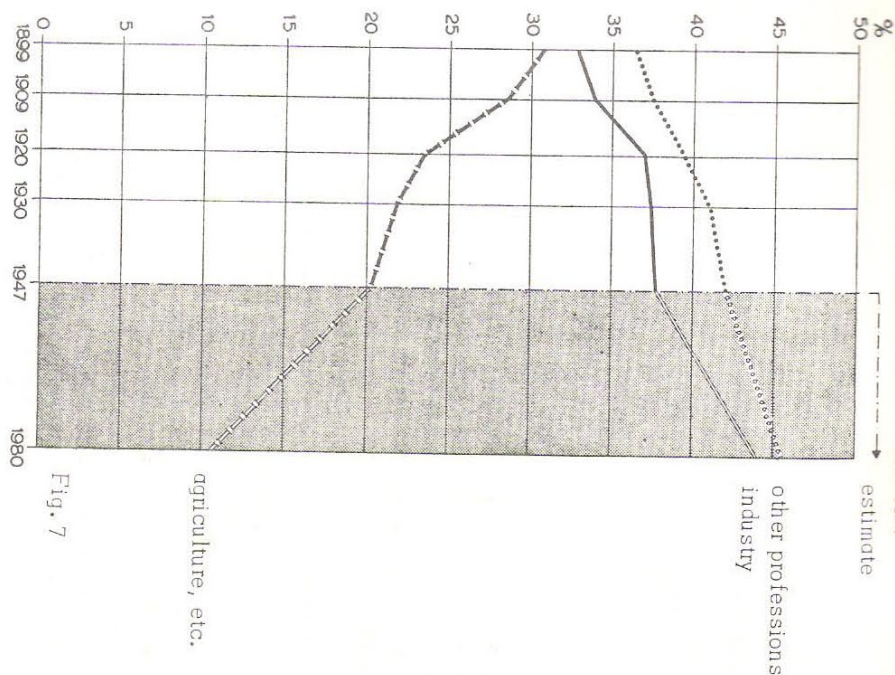


Fig. 7

problem, in which attention is to be paid to individual as well as to national and economic interests.

Greatly increased commuting is another probability. In the U.S.A., the flight of city dwellers to the surrounding country has taken on such large dimensions that it is referred to as the "explosion" of cities. For the limited territory of the Netherlands, the main objection to a similar development is the loss of the few large open spaces still available, and their conversion into large, partly urban, partly rural, built-up areas. It is therefore imperative to have opportunities for work in areas with pleasant living conditions, to make town-dwelling more attractive by proper planning of the new districts, and to create opportunities for country-dwelling at selected spots in a wide belt surrounding the large cities.

3. Trends in the distribution of population

There are considerable regional differences in natural birth rates. Towns generally have lower birth rates than the surrounding country; Roman-Catholic areas show higher birth rates than non-Roman-Catholic regions; the sand regions, on the whole, show a more rapid natural growth than the clay and peat areas. The South in particular has high birth rates.

The effect of the natural growth, however, is mitigated, in many respects, by internal migration. Owing to great differences in the capacity of the various regions to absorb the population growth, this growth is constantly below the national average in some regions, and above the national average in others. Exh. 8 shows the trend of this development since 1921.

The recorded migration flows have been further analysed by region for the period 1951 - 1958 (Exh. 9 tot 13). These maps show that in the South the net balances per area are very small and that the East, where migration is about in over-all balance, serves as a transit area: large net balances of immigration from the North, and of emigration to the West and the South. The North and South West regions show net emigration balances with virtually all other regions. The West, on the contrary, attracts population from practically all over the country.

A study of present tendencies, assuming that no attempts will be made to influence their natural trend, leads to the conclusion that the distribution of population may be expected to develop as follows: the share of the mainly agricultural North region will fall from 16.4 % of the total population in 1890 to about 10 % of the total population in 1980; this represents a net internal emigration of about 250,000 persons in the period 1951 - 1958. The number of agricultural labourers falls off rapidly in the North. Traditional industries cannot absorb them, and the newly established industries are as yet not sufficiently developed. This gives rise to development problems of a structural kind, which affect the whole character of the area. The East, which offers attractive living and working conditions, will probably be able to maintain its share of 18.7 % (in 1830). In addition to agriculture, the textile and metal industries were in the past the main sources of employment in this region. In the last decade, however, manufacturing industry has become much more varied. The region, moreover, is drawn more and more into the sphere of influence of the Randstad. The South, by reason of its rapid industrialisation and its easy labour market, has favourable prospects and may expect its share to rise from 20.5 % in 1930 to almost 22 % in 1980. The agricultural South-West may have great difficulty in limiting its falling share to about 2.6 % in 1980 (from 5.3 % in 1830). In the long run, improved transport connections, due to the Delta works, and the industrial possibilities of the area on the West Scheldt, will offer opportunities for more rapid industrial expansion, but it seems unlikely that these will materialise before 1980. The West, with a share of 39.1 % of the total population in 1830, has since shown a continuous increase;

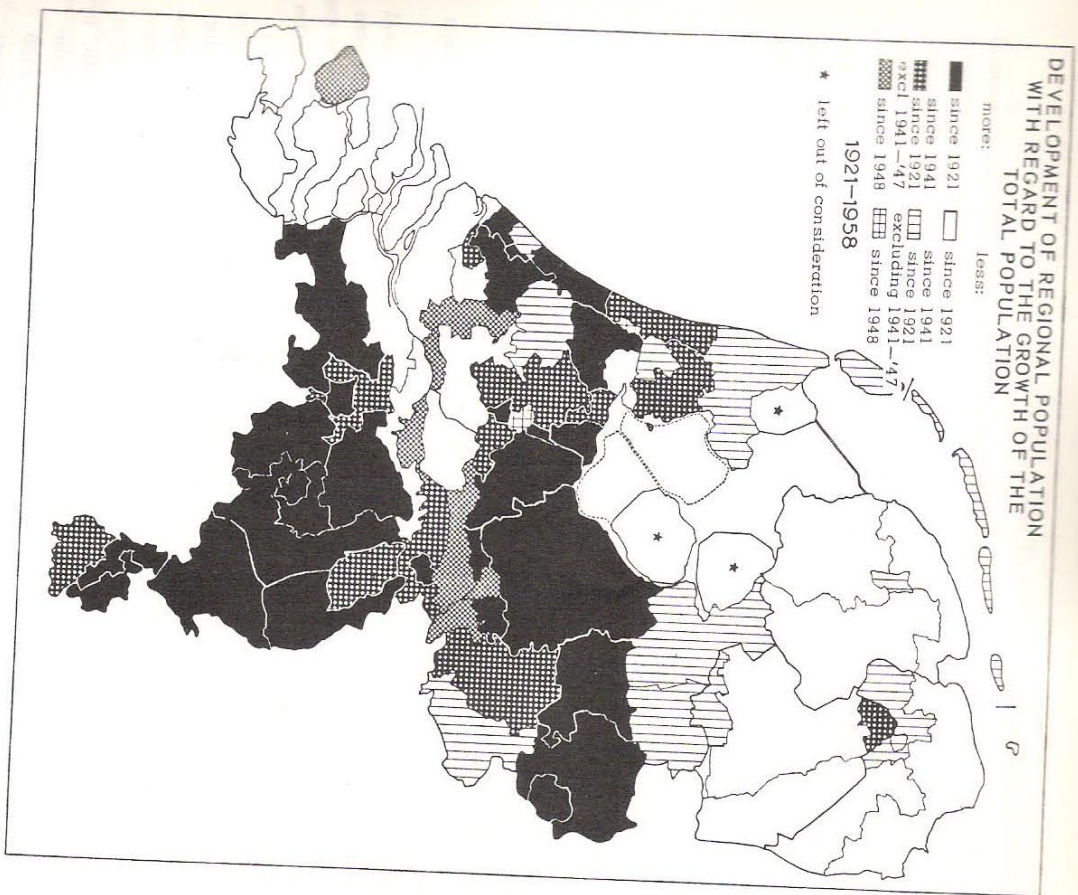


Fig. 8

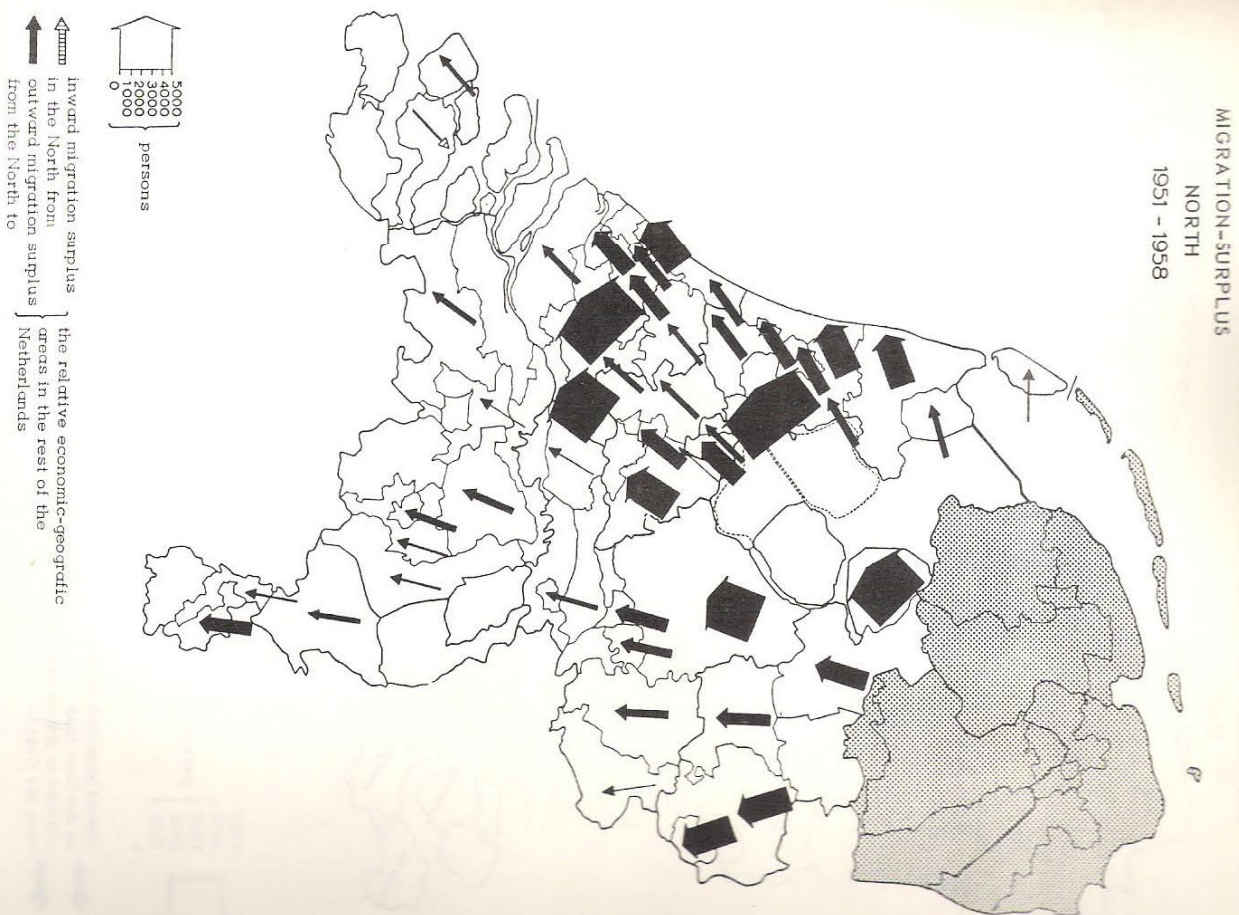


Fig. 9

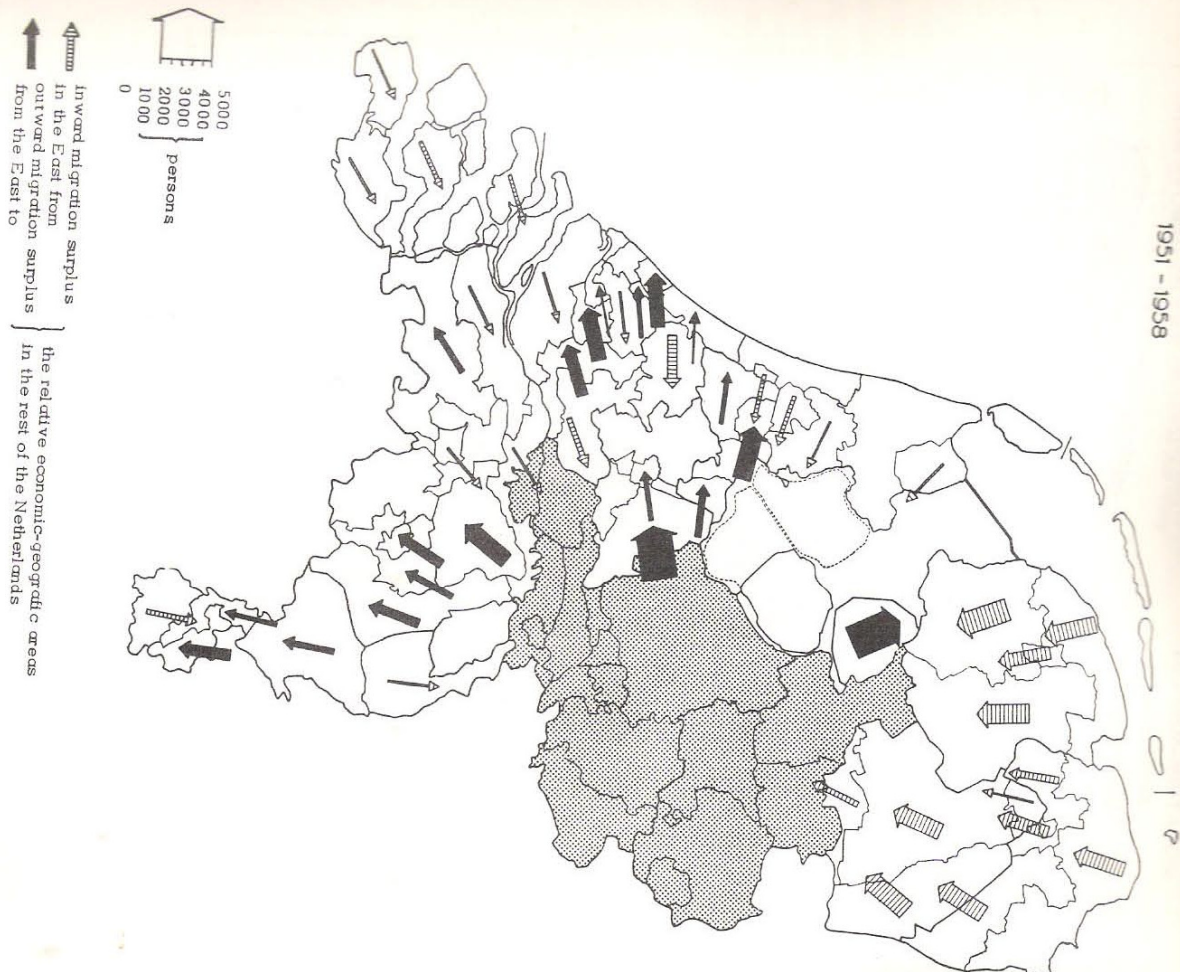


Fig. 10

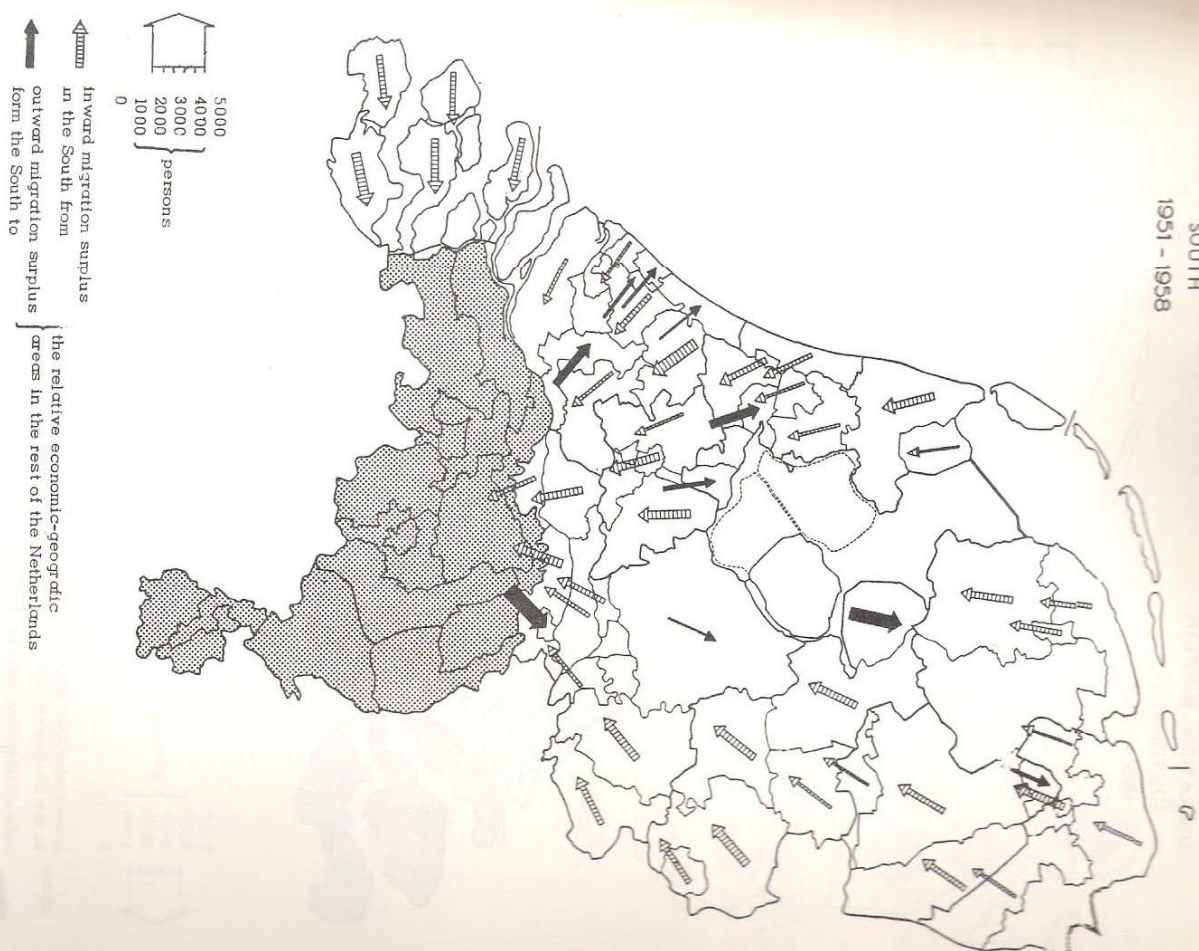


Fig. 11

MIGRATION-SURPLUS
SOUTH-WEST
1951 - 1958

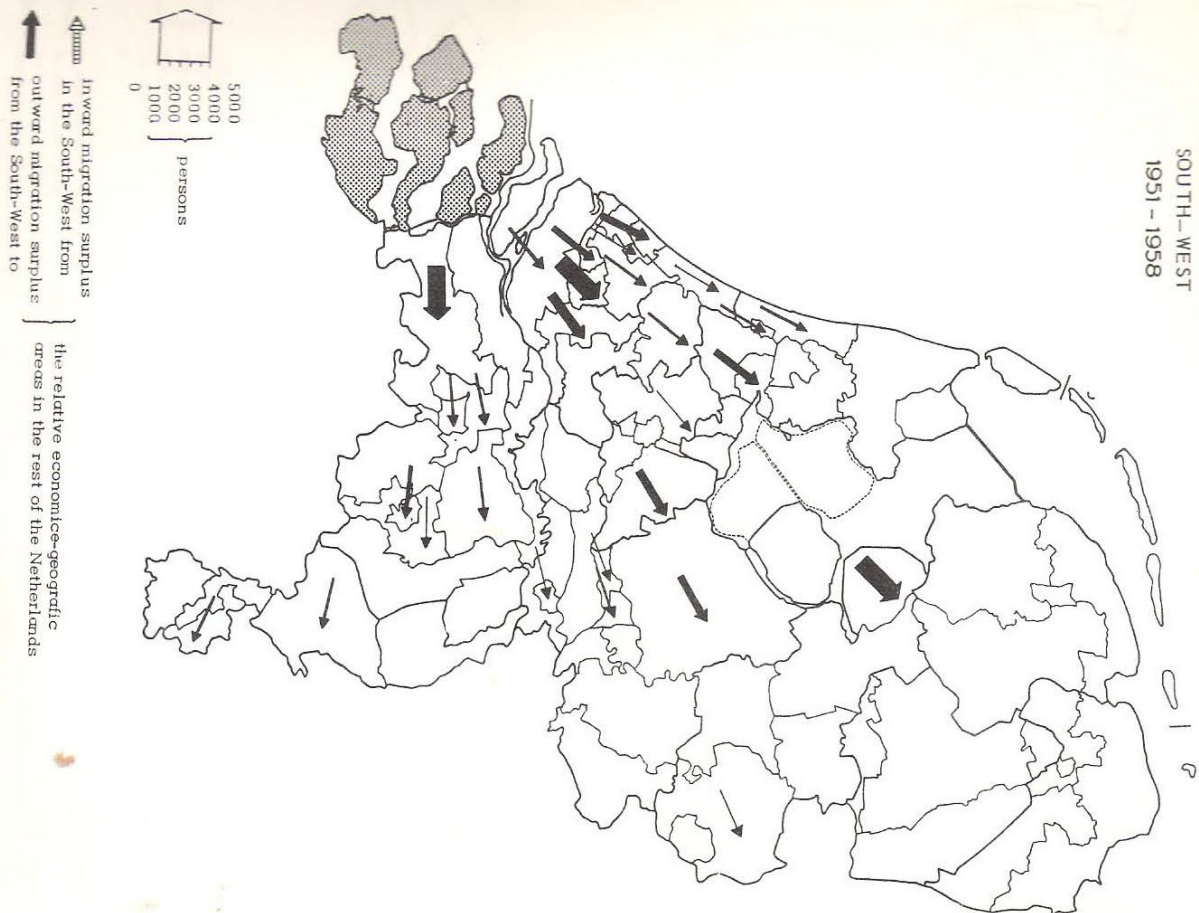


Fig. 12
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MIGRATION-SURPLUS
WEST
1951 - 1958

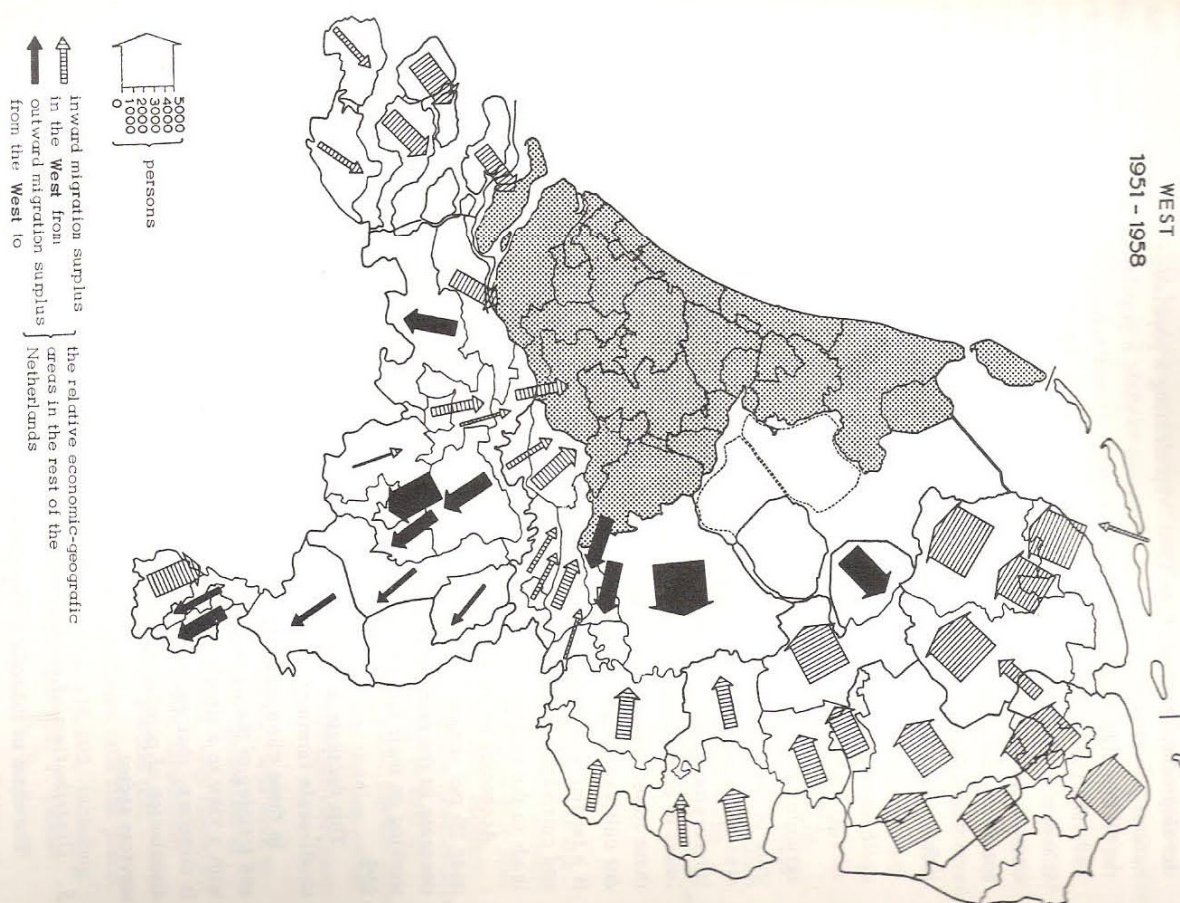


Fig. 13

it suffered a set-back during the Second World War, but may, with undisturbed further development, reach 48% in 1980, representing a population of 6.8 million. As the natural growth of the West was estimated to yield a population of 6.4 million in 1980, the former figure would imply a net internal immigration of 400,000 between 1950 and 1980 (including the cumulative effect of immigration on births). On consideration, it seems likely that the bulk of this will come from the North, that a small part will come from the South West and the East, and that the South will not, or will hardly, make any contribution.

The following sections deal with the contribution which each of the sectors of industry may be able to make towards a better distribution of the population.

4. *Effect of agricultural developments*

The distribution of population is influenced both by changes in the size of the agricultural area, and by structural developments in agriculture and horticulture. In spite of the growing encroachment on agricultural land by urban development, the area under cultivation is expected to increase, through land reclamation and land improvement, by half a million ha by 1980; this is without taking into account possible losses of cultivated land through abandonment and afforestation of bad-quality land, as these losses are impossible to estimate at the present stage. Regionally, the areas under cultivation are expected to show great fluctuations until 1980. In horticulture, there is a tendency to still greater intensification by changing over from outdoor cultivation and cultivation under glass to hothouses; in agriculture proper, rapid mechanisation leads to the enlargement of farm sizes.

According to the forecasts, the male agricultural working population will fall by over 1% per annum until 1980 (100,000 persons in total until 1980); the corresponding decrease in the number of farms is estimated at 46,000 (20%), and the number of sons working on their fathers' farms and of agricultural labourers is expected to fall by about 25%.

This decrease is expected to affect mainly the areas with a preponderance of small-scale farming, in the East and South of the country.

In these circumstances, it is desirable to make an early start with the instruction and training of the agricultural population, and in particular of the younger generation, with a view to a timely change-over to non-agricultural occupations. The conclusion is therefore, that agriculture is unable to absorb more labour, and that shifts in the distribution of population are dependent on the possibilities in industry and in the services sector.

5. *Distribution of manufacturing industry*

The share of manufacturing industry in the total working population is estimated at about 43% in 1980. 60% of the increase of working population between 1947 and 1980 is expected to be absorbed by industry. In the years 1950-1959, only about 20%

of the increase in industrial employment (over 122,000) was taken up by the West, and 80% by the other provinces. The possibilities of industrial decentralisation depend to a very high degree on the location tendencies of each particular industry. Mining is tied to a location where the soil contains minerals. Factors of location determine the siting of heavy industry (e.g. blastfurnaces, ship building and ship repairs) on deep water, while for reasons of waste disposal, the soda industry, for example, can only be situated on the coast. This does not apply to the majority of supplying and processing industries, however, as their location depends less on the factors mentioned above than on the location of the basic industry. In the production of semimanufactures and standardised parts particularly, successful decentralisation tendencies may be observed. In light industry (in particular light, labour-intensive industries in the metal and the chemical sector, cigar factories, textile mills, shoe factories, etc.), where an easy labour market and low cost of establishment are the deciding factors, decentralising tendencies have existed for a long time. They have, however, fully evolved only in recent times, as a result of modern developments in energy supply, transport and communications. The availability of good-quality ground water in great quantities, which is lacking in the West, is another factor in favour of industrial decentralisation, which is lacking in the West, is another factor in favour of industrial decentralisation. Deliberate encouragement of decentralisation through the industrial policy of the Government, legally in force since 1959 for the problem areas, will tend to strengthen these tendencies considerably.

6. *Distribution of the services sector*

When Government services are included, the share of the services sector in the total working population - covering trade, transport, banking and insurance, administrative occupations, free professions, recreation, tourism, etc. - is greater than that of industry. This excess is expected to persist during the period until 1980. Industry and services are to a very high degree interdependent. Some services are more or less the consequence of industrial production, others, on the contrary, may be said to fulfill a preparatory function. From the physical planning point of view, the attraction of a given location depends very much on the facilities offered by the services sector. Balanced regional development of this sector is therefore an important condition for successful distribution of industry.

Within the services sector, trade and transport establishments etc. will have to follow, to some extent, the distribution of industry. In this respect, promotion of regional industrialisation can thus achieve a double effect. An other, very important part of this sector, however, belongs specifically to the West, where Amsterdam functions as a commercial and financial centre and Rotterdam as a world port.

Among the administrative services, Government establishments take first place. The number of persons in Government service amounts to about 218,000, including the personnel of the State Mines (about 44,000 persons) and of the P. T. T. (about 52,000 persons); of the total number, about 42,000 persons are in The Hague. In view of their numbers, and of the stimulating effect they might have on locations

in the provinces outside the West, the Minister of Housing and Building, has instituted a "Committee for the Distribution of Government Establishments", with the former Prime Minister dr. W. Drees as its chairman.

At the end of December 1960 the Committee presented its report to the Government. A small interdepartmental working group was instructed to work out the suggestions of the committee and to make concrete proposals to the Government. The terms of reference of this Committee are, to investigate, in particular, the possibility of a transfer of certain categories of civil service departments. The importance of the educational and cultural sector lies in the influence exercised on environment, and thus, indirectly, on the possibilities of development. Higher education especially merits attention. To remedy the shortage of institutes of higher education in the regions outside the West, a recommendation was made to found a university with a technical faculty in the province of Overijssel.

As in the educational and cultural sector, better distribution in the sector of recreation and tourism would be valuable because of their influence on the environment; it would, moreover, contribute to the improvement of the basis of existence of many small traders. Recreation and tourism have mainly concentrated, so far, on the coast and on the big cities. This means that the West has to cater for the majority of foreign tourists, for the daily commuters to and from the Randstad and for a large number of Dutch holiday makers. An important part of recreational amenities could be provided by: a. the attractive rural areas in the sand regions; b. the new possibilities of water tourism created by the Zuiderzee and Delta works; and c. the old existing waterways.

The regional possibilities of distribution of the services sector therefore run parallel to those of industry, so far as the movement of services accompanies or follows industrialisation. For the rest, the main planning problems arise in the development of recreation and tourism, and in the transfer of certain functions of the Randstad Holland to areas in other parts of the country. The latter refers in particular to activities belonging to the administrative and cultural sector. In view of its location in relation to the Randstad and - on a larger scale - to the Rhine-Ruhr region, it seems likely that the East in particular will be able to play an important part in the future development of the services sector.

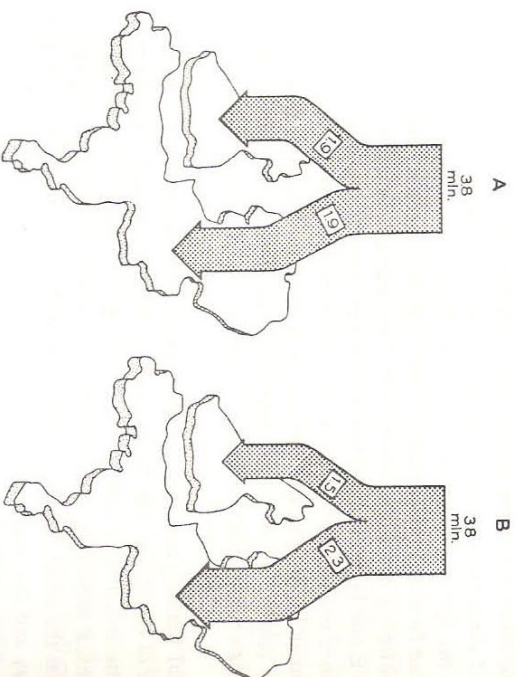
7. Possibility of harmonious distribution of population

The general conclusion arrived at in this chapter is, that the balanced distribution of employment opportunities and of population is not only expedient, but also possible, thanks to the progress made in the field of transport and energy, and in all sorts of modern provisions.

Tendencies already existing can be strengthened, but there must be a close interaction between the attempt to increase agricultural wealth, the distribution of industrialisation and the distribution of the services sector. The general aim is to draw all regions into modern development; the latter has its centre of gravity in the Randstad Holland, where it will also stay in the future.

It is not to be expected that the desired adjustment of population distribution will be completely automatic in all parts of the country. In the South it has succeeded, in the North and in Zeeland special measures will be needed. In a different sense, this is also true of the West. An important question is: what might be the order of magnitude of the effects of a successful decentralisation policy? A slower growth in the West, to the extent of diverting 400,000 people to the provinces between 1950 and 1980, would be satisfactory; it would mean an increase in the West, during this period, by only 1.5 million to 6.4 million in total (exh. 14).

Possibilities for distribution of the increase of population 1950 - 1980



A. Following today's tendencies (without affecting them)
B. assuming balanced migration 1950 - 1980

Fig. 14

CHAPTER IV - MAIN OUTLINES OF THE DESIRED PHYSICAL DEVELOPMENT OF THE NETHERLANDS

1. Working areas

Better distribution of population depends in the first instance on the distribution of employment opportunities. For this reason, the working areas should have priority when the solution of planning problems is under discussion.

In the years to come, by far the greater part of the country will preserve its function as an agricultural area. The area in agricultural use comprises at present 70% of the total land area of the Netherlands (exclusive of forest); it seems likely that this percentage will remain unchanged, at least during the next few decades, in spite of considerable urban development, extension of the road system, etc.

This does not mean that there will be no changes in the agricultural areas as such: some extension of the horticultural and forest areas, for example.

Even within the agricultural area in its more limited sense (crop farming, livestock farming and mixed farming) many changes may still be expected. Mechanisation is continuously developing and causes changes in farm management and pressure for larger farm sizes. This is combined with a large outflow of labour. This outflow calls for migration to centres of industry and services in other regions, on the one hand, and creates a strong need for accelerated industrialisation in the larger centres of the agricultural areas proper, on the other. Wherever this industrialisation occurs, new urban elements materialize and are bound - also in a social sense - to affect the rural population.

The industrial working areas with seaport and connected industries are concentrated round the mouths of the Rhine, the Meuse and the Scheldt. Modern developments in shipping and in the industries based on shipping (e. g. ship yards, blast furnaces and steel works, chemical industries based on oil, etc.) create tendencies towards further concentration near the coast, in places where large ships can be handled (in fact, on the New Waterway and the North Sea Canal).

To reserve space for further development based on the special facilities available in the largest ports, provisions should be made for parallel development elsewhere in the country. The Scheldt basin (Zeeland and Noord-Brabant) is the natural choice, and next, the Eems mouth in the North (Delfzijl).

Natural causes limit the concentration of the second group of working areas, the mining areas, to a geographically narrowly defined area. Its main centre is in Limburg (coal). Other centres are Twente, and lately also north east Groningen (salt and natural gas).

Other industrial working areas are mainly concentrated in larger or smaller towns. Outside the Randstad Holland, mention should be made of the industrial towns in Noord-Brabant, Gelderland, Overijssel and Groningen, and, lately, of the emerging centres of mainly light industry in several regions outside the West.

The working areas for the services sector also are concentrated in the towns, in particular in the Randstad Holland. Next, the tourist regions attract more and more attention in their capacity as working areas for the tourist industry. The close connection between a large part of the services sector and industry increases, for both, the importance of vigorous, well-equipped centres.

All parts of the country should be drawn into the further development of the working areas, taking into account their distinctive possibilities. This should not be interpreted as an endeavour to fit the whole country into an identical pattern.

Whereas some regions are particularly suitable for agricultural production, in others the stress is on their suitability as industrial working areas, or as residential or recreation areas, etc. Geographical conditions, nature of the soil, location in relation to transport and many other features sometimes give rise to very wide variations. The latter must be encouraged, so as to maintain the healthy interaction between town and country, living and working, agriculture and industry, daily environment and sphere of recreation.

While accepting this differentiation, it is still possible to aim at a better distribution of working areas over the country. In the South and the East, this only means the extension and strengthening of already existing development tendencies. In the South West, the aim is to realise the possibilities which are already incorporated in the Delta works. In the North, important beginnings have been made, but here the necessary process of development has not quite got into its stride yet. Besides, this region lacks to some extent the advantages of a favourable transport situation etc., to which the East and the South owe their revival. Within the framework of national physical planning, the North, therefore, requires special attention.

Summing up, the main outlines of policy in the working areas are:

- rational development of the agricultural areas, while preserving large connected units, especially in the clay and peat regions;
- further improvement of the physical planning conditions in the West, for the benefit of the working areas dependent on the Randstad Holland, in the industrial and services sectors;
- better national distribution of the other working areas, in the industrial and services sectors, combined with effective regional concentration;
- special attention to be paid to improvement of the conditions of location in the North.

2. Dwelling areas

In these areas, the dominating factor will be the strong growth of urbanisation which may, however, develop new aspects.

The changes in economic structure clearly point towards greater opportunities of employment in industry and services. On the whole, those activities tend to concentrate in an urban environment. According to the estimates submitted in Chapter III, 90% of the Dutch population will towards 1980 be working in nonagricultural occupations.

The percentage of the total population living in municipalities of over 20,000 inhabitants, at present at 60%, will probably rise to about 70% in 1980.

The large population increase expected in the 1950-1980 period - about four million persons - will have to be accommodated almost entirely in an urban environment. For this reason, the proposed more balanced development of the country as a whole will depend very much on the extent to which the settlements outside the West will be able to play their allotted part.

It is, however, not impossible that the form of urbanisation will be modified in the future. A strong demand exists for conditions which make it possible to live in an urban environment and within reach of urban culture, and at the same time to have the advantages of a one-family house and more contact with nature. There is a growing need to live in the country, or - so far only to a lesser degree - to possess a second house out of town.

Faster transport, increased wealth, more leisure time, all contribute to this process. Originally, only areas of natural attraction were in demand; nowadays, agricultural areas too are affected by the dispersion of living accommodation.

Further reflection on the forms of urban living is therefore necessary.

The first need is for good town plans, which will make living in towns more attractive than it is now. For several reasons, the density of urban building has been rather high, especially in the first years after the war. Experience has since led to a certain relaxation. The emergent tendencies may lead to an even more radical reorientation, with a view to creating the desired living conditions, in spite of the rather large area of land which would be involved. The total area needed for non-agricultural purposes, until 1980, has been estimated at about 75,000 ha. (185,383 acres).

This figure may be seen as the inevitable result of the structural shift from agriculture to more urban occupations. This result is in fact acceptable, in view of what has been said before about the size of the agricultural area. After all, this loss of agricultural land means that until 1980, a population increase of almost 25% will be accommodated on 4 to 5% of the present agricultural area, and the loss will be more than compensated by the reclamation of new land.

In urban construction too, there is a general urge towards the retention of a manageable scale, and towards the introduction of space and open places into large conurbations. In places, this produces solutions by which town and country to some extent intermingle because green wedges penetrate deeply into the built-up area.

Meanwhile it is obvious that circumstances in the Randstad do not allow unlimited compliance with the new demands on living conditions, either as regards space, or as regards financial possibilities and reasonable rents. This is a further reason to prevent, so far as possible, excessive growth of major cities by diverting suitable new development to areas with more space and less expensive living accommodation.

The second line of action should be to direct country-dwelling itself into the right channels. Where forests, heath and dunes are concerned, the policy should be to restrict residential occupation.

In agricultural areas too, conflicting interests should be carefully balanced; the quality of the soil in particular is an important factor in this case. It will not be possible to prevent all further occupation of agricultural land by country dwellers, especially not within the sphere of influence of the Randstad.

The main outlines of policy suggested for the residential areas are:

- a. in general, provision of well-designed, sufficiently spacious urban development plans;
- b. protection of forest, heath and dune areas against excessive occupation for purposes of permanent or temporary dwelling;
- c. development of suitably selected sites within the sphere of influence of the large towns, for country-dwelling.

3. *The system of settlements*

The Netherlands have a very high density of settlements, the result of her peculiar historical development, on the one hand, and of the Western European tradition of settlement on agricultural land, on the other. The total number of settlements amounts to about 4,100; of these, about 2,400 centres have less than 500 inhabitants. Owing to the density of the system, distances between centres are small: in the old agricultural areas they average between 2.2 and 3.5 km. (1.4 and 2.2 miles).

The problems arising from this state of affairs, although occurring in all parts of the country, are especially urgent in those regions which have long been known as typical expulsion areas: the North and the South West. The decline of the population is in itself already a source of difficulties for the smaller service-providing centres; even a minor excess of emigration will threaten their viability.

Apart from the decline of the total population, there are also tendencies peculiar to the countryside which tend to be detrimental to small centres. The termination of the social and cultural isolation of the countryside, in particular, has much contributed to the demand, by the rural population, for a higher standard of services; the latter can only be provided by a better equipped - which usually means: a larger - centre.

This re-orientation process is further encouraged - and has been made possible - by the improvement, extension and speeding up of transport. Bus services, the spread of car-owning, and the rapid increase in the number of mopeds have reduced travelling times between centres to negligible amounts. In less than the time formerly needed to get to the nearest hamlet, the main village, or even the regional centre, can now be reached.

This, in its turn, produces a change in the location preferences of the retail trade. The ultimate result of this complicated process of action and interaction is that many agricultural centres lose their function to a great extent, and in the long run the process may even lead to the disappearance of the basis of existence of small villages and hamlets. At present, centres of less than 500 inhabitants are especially affected: their size appears to approach the minimum level of subsistence.

It seems likely, however, that this minimum level will be raised further in the years to come.

The process of re-orientation of the rural population, described above, demands that the centres which are due to be further developed should be properly integrated into a system. Whereas a number of factors, combined and interacting, cause small centres to lose their function, the same combination of factors should be used, as much as possible, to arrive at a larger and geographically favourably situated system of centres. In fact, population and retail trade frequently take the lead through their own choice of location; the task of the authorities is to encourage this process, e.g. through allocation of houses, subsidising policy, etc. In this way will the often painful transition period be kept as short as possible.

Within the wider network of central settlements, first place should be reserved for a fairly large number of viable villages, which, now and in the future, will be ready to fulfil the function of local centres, providing services to the inhabitants of the surrounding countryside. Those services would include the provision of the daily necessities of life (baker, milkman, etc.), but also church, 6-form primary school, doctor, welfare clinic, veterinarian agricultural credit bank, village hall, etc.

Another function of these villages has always been to provide a dwelling centre for the agricultural workers (and of course also for the population which dispenses the services). They will no doubt continue to do so, also in the future; possibly they may also provide, to an increasing extent, a dwelling centre for commuting industrial workers. Except for the provision of services, the work function of these villages is as a rule unimportant.

Above the level of viable villages, a system of regional centres is required. Those centres should have extensive facilities for the provision of services and institutional needs, and thus be equipped to serve a whole region. Practically all regional centres provide at least such amenities as agricultural colleges, technical schools, swimming pools, cinemas and weekly markets. The major regional centres possess, moreover, training colleges, regional law courts, Chambers of Commerce, secondary schools, hospitals and libraries. Within the system, the smaller centres are usually dependent on the larger centres, but sometimes they have the supplementary function of filling in "gaps" in the network. In those cases, small centres may possess a relatively very large service apparatus. As a rule, the shopping amenities in the large centres are obviously better and more varied than in small regional centres.

Large regional centres, as well as large towns, should be considered for industrial development. As industrial centres generally, are viable only when they have reached a given minimum level of development, a certain amount of industrial concentration is inevitable.

The measures to be taken must be deliberately designed to stimulate localities where existing conditions offer the best possible guarantee for a successful policy. Both the attraction which industry itself exercises, and the cumulative effect of the whole system of primary and secondary location tendencies on industrial development, must be taken into account.

Apart from the large towns, only the major regional centres can satisfy these conditions as a rule. They offer a varied labour market to the entrepreneur and a wide choice of employment to the worker, thanks to the wide range of services available, the social and cultural amenities are also sufficient to attract highly trained personnel. Conversely, the welfare of the region as a whole - for example, the North - is best assured by the concentration of industry in the larger centres; the basic, motivating function of these centres will thus be strengthened, and consequently, they will be able to exercise their service function all the better.

The top level of the system of settlements is occupied by a limited number of large towns. They provide a wide variety of shops to satisfy special requirements; they offer all kinds of possibilities for social contact and recreation; they are the seats of important organisations and institutions, institutes of higher learning, theatre companies, orchestras, etc. Towns of this kind should be of the order of magnitude of 100,000 and more - if not 200,000 and more - inhabitants. They should be supported by a large economic apparatus consisting of basic establishments. Nowadays, a basis of this kind can be provided only by manufacturing industry; the latter should be located, at least in part, in the town itself. In view of the strong tendency to agglomeration which accompanies their development, efforts should be made to bring a number of towns outside the West up to this level, which should then be regarded as equal in quality to that of the Randstad.

Summarizing, the main demand is for a network of settlements, adapted to modern conditions, and organically built up from:

- a. viable villages: rural centres with a service function of local importance, and a dwelling function for the benefit of the service-providing and the agricultural population groups;
- b. regional centres: centres with an urban character, which fulfil a service function for the entire region; the larger centres also function as concentration points for industry;
- c. large towns with 100,000 to 200,000 or more inhabitants, acting as centres of gravity in the regions outside the West of the Country.
- d. the Randstad Holland, as the Dutch metropolis.

4. *The Randstad Holland*

Unlike many conurbations abroad, the City Ring of Holland has an open structure: it consists of a ring of well-separated cities and a large agricultural area in the centre. This open structure should be preserved while the expected growth of population is being absorbed (the present population numbers 4.2 million, the estimated population for 1980 is 5.5 million). It means that the whole system should be encouraged to expand outwards. This can best be achieved by extension along, or near, the roads, waterways and railway lines radiating from the Randstad Holland.

Even so, the preservation of the relatively narrow gaps in the urban ring will raise difficult problems.

These zones will not be more than about 4 km wide at the most. Because they adjoin large agglomerations, they will become part of the urban environment. They will therefore be subject to strong tensions, if not caused by the pressure of building, then by that of other developments peculiar to the fringes of towns. Experience has taught that in those circumstances agriculture is not by itself strong enough to stand up to the pressure. It will therefore be necessary to turn these areas into "buffer zones" through the application of specially designed measures.

"Buffer zones" introduce a new element into town planning. They should not be regarded as greatly enlarged town parks. The idea is, on the contrary, to treat the intervening zones so far as possible as a "landscape" in normal use, and at the same time to open them up for light transport and to provide recreational amenities on a modest scale, so as to bring them within better reach of town dwellers. In view of their total size (about 16,000 ha = 39,538 acres), a special administration will be needed for these areas.

In the central area, the wish to preserve a large open space does not, of course, exclude the possibility that this region too will be affected by the growth of the Randstad. It is, however, the intention to keep this development strictly limited, and concentrated in a few centres, e.g. Gouda, Alphen, Woerden and possibly Wilsveen; the central area proper would thus remain really large.

Outward expansion of the Randstad has the advantage of automatically interlinking "the West" with the areas on the periphery Parts of Gelderland and Noord-Brabant, as well as the southern IJsselmeer polders and the Delta district belong to those areas. It is a happy co-incidence that the Zuiderzee works and the Delta works will each in its way contribute to creating new possibilities for the outward development of the Randstad. The southern polders in the IJsselake, for example, will be able to make an important contribution to the solution of the difficulties in the northern sector of the Randstad (over-population of the Gooi area), and the changes resulting from the Delta works open new perspectives for further development of the Waterway area. Special attention should therefore be paid to the inter-relation between those works and the plans for the Randstad.

The main outlines of policy for the development of the Randstad Holland therefore are:

- a. objections from the point of view of physical planning to be met by diverting new developments to regions outside the West;
- b. in the Randstad proper: the historic centres on the urban ring to be conserved as permanent, geographically separate centres of gravity;
- c. preservation of an agriculturally central area to provide an open space of ample dimensions inside the urban ring;
- d. outward expansion of the entire Randstad;
- e. co-ordination between the plans for the Randstad and those for land reclamation in the IJsselmeer and the Delta area.

5. Recreation and the preservation of nature

Proper development of recreational amenities demands the preservation of existing, and the creation of new, amenities; in either case with a view to satisfactory access, lay-out and accommodation. The struggle for recreational amenities is too often considered only from the point of view of the preservation of existing areas. In fact, the other elements are at least equally important.

The changing ideas as to quality, since the Second World War, should be taken into account when dealing with accommodation. It seems likely that the demand for better quality will go on increasing. This will affect the investments by private enterprises, for improvement and maintenance of accommodation. The authorities too will have to take account of this trend.

The provisions for daily recreation made for the benefit of town dwellers in, or in the immediate vicinity of, the towns, have gradually become a common feature of municipal development plans. They will be needed all the more, now that the shortening of the working week provides people with more leisure time.

Exhibit 15 shows the most important recreation regions and areas, according to the inventory of recreational possibilities prepared by the Government Physical Planning Service. In this survey, no distinction was made between regions accessible for day trips from near-by population centres, and holiday regions. Combined use of both kinds of recreation is already the rule now, and it may be expected to become more so as mobility increases: already one can make day trips to areas which formerly were within reach of holiday makers only. The capital investment needed, moreover, demands intensive exploitation, because large regions with high-class accommodation exclusively for holiday use do not pay (short season, unreliable climate, unreliability of the economic situation): a large amount of regular day-visits is needed to diminish the risks and to broaden the economic basis. The development of large, intensively used recreational regions must therefore be expected in areas which are both attractive to holiday makers, and accessible to a great number of day tourists. Well-conceived development of large recreation regions of this kind will make it possible to have, side by side with the intensively occupied places, areas where there is peace and quiet. Accommodation for holiday makers will have to be sited so as not to impair the recreational value of the area.

Within the recreation regions, the recreation areas constitute the most important group of touristic elements. The beaches were the direct cause of the growth of the largest recreation centres in the country. In view of the highly intensive development which has partly been achieved already, and which may be expected to go on in these centres, a purposeful recreational policy is very urgent.

Particularly valuable are the areas which owe their attraction to their vast expanse, e.g. the Veluwe, the Kempen and large parts of Drenthe. Owing to the intensive land use in the Netherlands, only very few areas of this kind remain.



Fig. 15

They offer the possibility, rare in this part of Western Europe, to get away from the noise of our civilisation for a few hours, and therefore they will be even more valuable in the future than they are now. As they owe this value to the combination of their natural attractiveness and their dimensions, it is important to guard against contraction of their size as a result of road building, land improvement and occupation of the fringes. Their number is already so small that this should apply to all remaining areas of this kind.

Although some other regions offer little opportunity to spend long hours on the heath or in the dunes etc., they still draw a great many tourists by reason of the particular attraction of their landscape (e.g. southern Limburg, Twente, central Drenthe). Here too, dimensions are important: regions below a given size are insufficiently attractive, especially to holiday makers, to go on participating in the expected development. It is therefore important to preserve landscape beauty on a sufficiently large scale.

The regions concerned are mostly those with mixed farms on diluvial soil, often scenically enriched by country estates and country houses. Now that land improvement has practically ceased, the main changes in these areas occur through the construction of main roads, the occupation of land by foundations, etc.; large areas are thus closed to the public, and the region is being split up into small sections.

It is precisely in these regions, however, that tourism may become a great economic asset, also for the agricultural population. When attempts are made to modify the existing structure, this should enter into consideration at every stage. A deliberate policy of recreational development may prove to be economically advantageous, while at the same time serving social interests. Modern land consolidation schemes do already take this recreational aspect into account.

Also in the polders, the larger regions where agriculture is being modernised, need comprehensive landscaping in the interest of recreation, and the provision of sufficient tourist accommodation.

In the Netherlands, the water offers ample possibilities for recreation, which have been partially explored already. This applies in particular to the sport of fishing, which has become increasingly popular in the last few years.

From the point of view of the country as a whole, the location of the principal lakes and of other waters suitable for recreation is favourable in that it goes some way to meet the shortage of recreational opportunities in the densely populated West. In recreation areas, water is an element of great importance. The combination of water sports and recreation on land makes it possible to have amenities which would not pay if they were meant to serve either of those activities separately. The administration and management of the shore zones are therefore of great importance.

The planning of the recreation area "Brielse Maas", the Veluwe lake along Eastern Flevoland, the ideas on the Three-Islands plan, the Grevelingen and similar areas serve as examples of the kind of development which is necessary and possible in many parts of the country.

When the waterways in the Delta area are also developed for recreation, and when the border lakes along the IJsselmeer polders are available as a link between the area of the Frisian lakes, the lakes in north west Overijssel and the waters of the West and South West, it will be possible - making use of the great rivers and canals - to create a richly varied system of large capacity. It will open up possibilities of long distance water tourism, which do not exist, to the same extent, elsewhere in Europe, and which will therefore also attract international attention.

Next to recreation in the open air, active recreation, that is sports, also demands more and more attention. During the last few decades, several factors have contributed to make sport an important element in society; it looks as if its significance will increase further in the years to come, partly as the result of shorter working hours. It is therefore important to make sure, in good time, that sufficient accommodation becomes available, not only for the sportsmen themselves, but also for the spectators. According to data provided by the Central Bureau for Statistics, in 1958 the number of visitors to sporting events was over 15.5 million; this places sport as a spectacle second in the range of amusements (after the cinema).

The protection of nature springs from a multitude of motives. Apart from the value attached to it for non-materialistic reasons, there are the interests of science; they in turn sometimes produce results which are applied to practical purposes, for example, in agriculture. The demands of nature protection are usually opposed to those of recreation. Although as a rule the public can be admitted to nature reserves, in some cases this is not, or is only to a limited extent, possible. The various interests involved were taken into account in the drawing up of the "Provisional priority list of areas of natural interest in need of protection"; on the basis of this list, the obligation to report intended land purchase and development was imposed in section 29 of the Act on the provisional regulation of the national plan and the regional plans (Act of 28 September 1950). Since then, the list is regularly being revised, thanks mainly to the efforts of the inventory committee of the Provisional Council for the Protection of Nature. In the preparation of municipal development plans and regional plans, the interests of nature protection are being balanced against the other interests involved.

When, in the course of this process, a choice has to be made between opposing interests, it will be necessary to consider, not only the characteristics of the area and its value for science, but also its comparative rarity.

- The main outlines of policy for recreation and the protection of nature are thus:
- the creation of new, large-scale opportunities for the recreation of the city populations in or near the places where they live; for example in the "buffer zones";
 - preservation and development of well-equipped recreation regions with special attention to the few extensive recreation areas which are still intact;
 - care of the landscape in its recreational and touristic capacity;
 - development of opportunities for recreation near or on the water;

- all such provisions to be treated as an important part of large Government projects;
- provisions for active recreation;
- preservation of sufficient samples of types of land which are important from the point of view of natural science.

6. Military areas

The areas in use for military purposes (5300 ha, or 13,097 acres) are mainly situated within the urban sphere of influence. Several old buildings owned by the military authorities which no longer conform to contemporary standards for barracks, have to be replaced by new quarters, either in the new parts of the town, or - preferable in most cases - outside the town. Land must be made available for this purpose. The space occupied by the old buildings could be valuable for re-development of the town centres. Apart from the military buildings, there are also those which are used as workshops and for storage, e.g. old forts and fortifications, which otherwise are valuable only from the historical and landscape point of view. With a change in use, they could become more important for recreational purposes, for example, in or near the "buffer zones".

Hitherto, the sites selected for the construction of more modern storage space were often situated in wooded areas, or in places where the landscape, by reason of its vegetation, provided a certain amount of cover. So far as land is needed for these and similar purposes, it might be possible to consider in future also sub-marginal agricultural land.

Some of the aerodromes (5,400 ha, or 13,344 acres) are situated at such short distances from built-up areas that they cause considerable nuisance to the surrounding population, especially since the increasing use of jet-planes. If at all possible, new development of similar situations should be avoided.

Training grounds (31,300 ha, or 77,345 acres), including rifle and artillery ranges, are mainly situated in rural areas. This has the advantage that the areas have remained more or less intact, and have not been lost to recreation through land improvement or building.

Notwithstanding the precautions taken by the military authorities, part of these grounds is, however, seriously damaged by exercises with tanks and other vehicles fitted with caterpillar tyres. This destruction is all the more regrettable in that recreation grounds are becoming so much more valuable to society. For lack of other suitable space, moreover, some training grounds have been established on sites, or in areas, where one would have liked to prevent it in view of nature protection, recreation, and tourism.

The military authorities, furthermore, have asked for the extension of training facilities.

A possible solution might be found in the reclamation of the Balgzand (7,000 ha, or 17,300 acres), east of Den Helder.

WATERWAYS

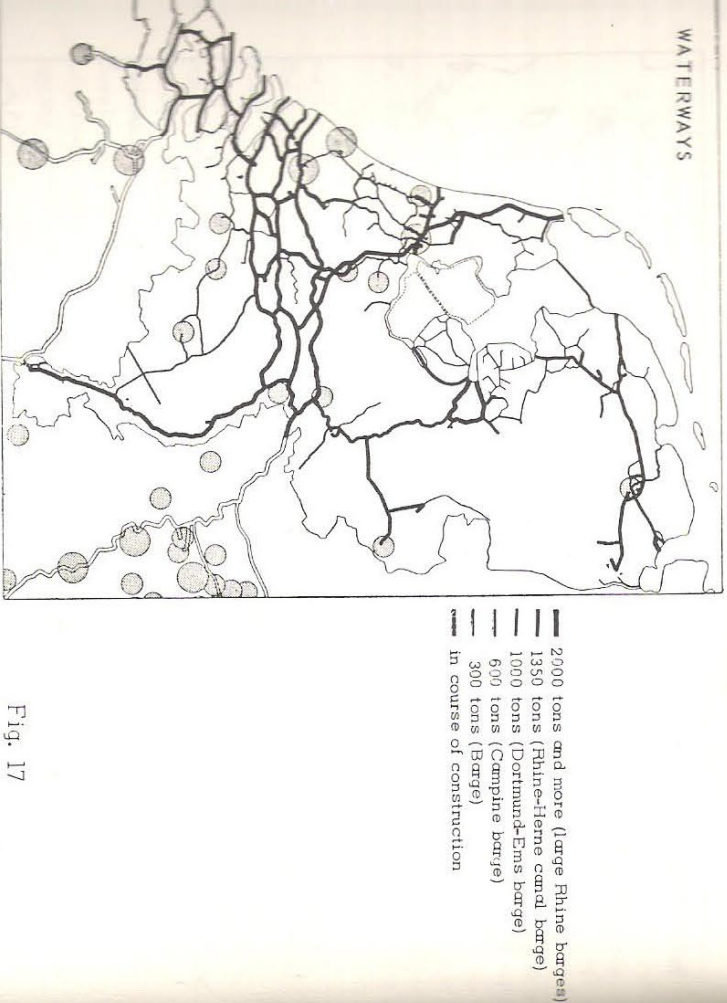


Fig. 17

Outside the Netherlands only waterways, for barges of 1,350 tons and more are indicated.

countries - let alone the United States: in 1959, there were 39.6 private cars per 1000 inhabitants. For 1980, a ratio of one car per 6 inhabitants seems a reasonable estimate; taking into account the growth of population, this would mean an increase in traffic to about 6 times that of 1955. With in the present network of motor roads and motor ways, there are still some links missing between the Randstad and the areas outside. The increase of the number of cars is fastest in the Randstad and the pressure is therefore likely to become greater in that area. The costs of road construction per km (0.62 mile) and of the ancillary engineering works (tunnels, viaducts) are, however, highest in this particular part of the country.

The Government Roads Plan 1958 contains several newly designed roads which will play an important part in the development of the Randstad and contribute to the accessibility of development areas. Further additions to the traffic system, within and outside the Randstad, are being studied by the Department of Transport and Waterstaat.

MOTOR TRAFFIC ON STATE ROADS

average intensity per 24 hours in 1955

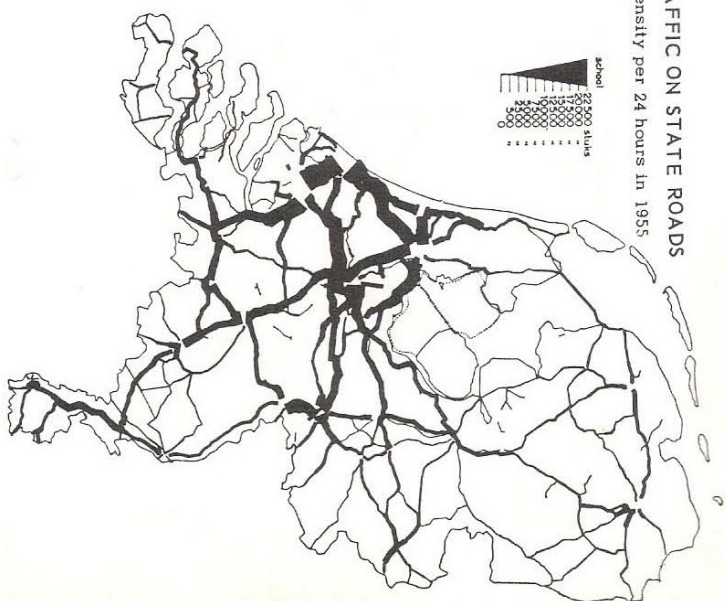


Fig. 18

from: Service for traffic research of Rijkswaterstaat

The execution of the Delta plan will bring with it better connections between the Randstad and the South West. It seems likely, for example, that apart from the road along the dams, another road Rotterdam-Volkerakdam-Bergen op Zoom, with a possible extension to Antwerp, will be constructed "Zoom road" or "Benelux road". The construction of this road is very important for the proposed development of Zeeland and West Brabant.

In addition to these great through roads, there will be branch roads connecting the regions. These are also being studied by the authorities. The railway system (Exh. 19) does not show any important gaps in the connections between the Randstad and the outside areas. The electrification of the radial lines has been completed.

EXTENT OF PASSENGER TRAFFIC TIMETABLE SUMMER 1960

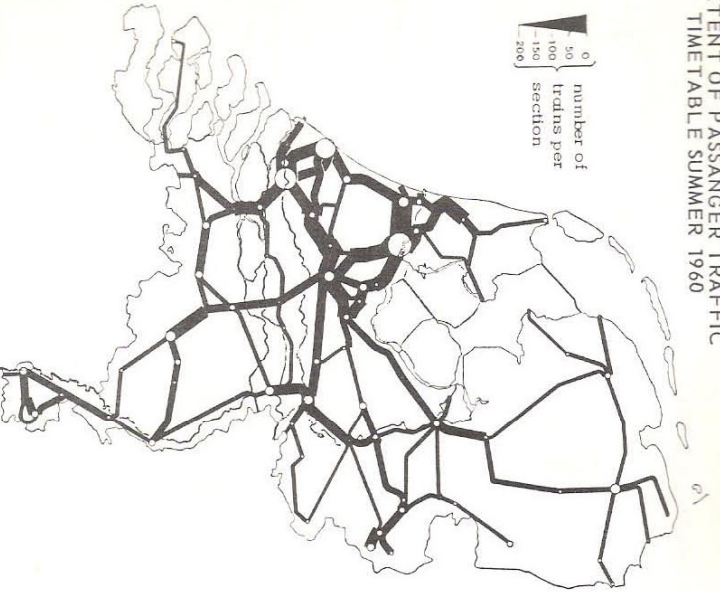


Fig. 19

Outside the Randstad, the only sizeable gaps in the system are in the Delta area, the IJsselmeer polders, and in the north east where the line from Zwolle via Coevorden terminates at Emmen. The first two areas are not likely, for the time being, to enjoy the benefits of rail traffic, in view of their geographical condition and the stage of development they are in. The problem of the north east also presents economic difficulties.

The main problems arise in the Randstad. Hitherto, the 19th century railway system has been on the whole sufficient, thanks to continuous modernisation of equipment. If the Randstad develops as expected, however, considerable improvement of the existing railway system is imperative. These problems, involving mostly very expensive projects, are under discussion by the Netherlands Railways.

Public utilities are mostly well adapted to the planned distribution of population, although regionally there are a few places where further extension would be useful.

The aim is to develop energy supply in particular, at the same rate as the rapidly increasing demands of industry and the emerging new developments of the economy. The extension of the public water supply is concerned, not only with the fitness for human occupation of the rural areas in general, but also with the demands of modernisation of agriculture, and in some cases, with those of industrial development, demand, due to the growth of population, the increased water consumption per head, and the increased industrial consumption. In view of this, particular attention should be paid both to the supply of surface water and to the possibilities of using ground water. The latter implies that the areas from which ground water is obtained must be permanently protected against chemical and bacteriological pollution of the soil. In addition to the protection of existing water supplies, attention must be paid to the new waterworks which will have to be constructed in the course of the years to keep up with the increase of population and of water consumption. Special care must be taken to protect the soil against infiltration of petrol and other petroleum products.

In some parts of the country - notably in the peat areas - pressure pipes will have to be constructed for the removal of industrial waste to the sea. The relevant plans are being drawn up by the Government Institute for the purification of waste water. The execution of these plans is one of the main conditions for the creation of more habitable surroundings in this particular part of the northern problem area, and for the attraction of new industries to that part of the country.

- The main outlines of policy for transport and public utilities are thus:
- in general: early adaptation, nationally and regionally, to the desired development of the country, particularly for stimulating the development of selected centres;
 - as regards the public water supply: special attention to be paid to the quality of surface water and to the protection of existing and future areas from which ground water is or will be obtained, against bacteriological and chemical pollution (e.g. by petrol and other petroleum products);
 - construction of pressure pipes for the removal of industrial waste to the sea from regions with highly polluted surface water.

1. Legislation on physical planning

It is obvious from the substance of this report that the problems relating to physical planning are urgent and wide-ranging. The Government, therefore, is of the opinion that in the first instance a special Act dealing with physical planning is needed. Hitherto, planning measures taken by the Central Government, provinces and municipalities were based, in part on the Housing Act (municipal development plans), in part on the Act of 28th September 1950 dealing with the national plan and regional plans, which was meant to be provisional. In the interests of an effective policy, these transitional arrangements should be replaced, as soon as possible, by more permanent regulation.

In 1956, after extensive interdepartmental consultations, a separate bill on physical planning was introduced.

In July 1962 this bill became a law. It will however, still take a great deal of time, before this law will be put into force.

2. Co-ordination and direction of Government policy in respect of physical planning

The most diverse aspects of Government policy have a bearing on the physical development of the country, and in each case this must be taken into account when policy decisions are being made. It applies, for example, to a high degree to the planning and execution of extensive Government projects, but it also occurs in the planning of public utilities, in housing, in distribution of educational establishments and administrative services, in granting support, directly or indirectly, to agricultural activities, industry, active and passive recreation, social and cultural matters, etc. Purely organisational, administrative of financial measures may also affect the interests of physical planning.

Physical planning, consequently, should not be regarded as an independent matter, which can be divorced from other specialised subjects; it is, on the contrary, closely interwoven with other subjects. The essential function of physical planning is, indeed, to aim at the optimum over-all development of a given area. This is why physical planning is more than the sum total of the various separate interests, and yet can never ignore those interests. Its purpose is to integrate the development of agriculture, industry, housing, recreation, transport, etc. into the harmonious development of the area as a whole. On the national level, planning is therefore mainly concerned with co-ordination and general direction of Government policy.

This co-ordination covers economic policy, on the one hand, and social and cultural planning, on the other. The first and foremost condition for co-ordination on a national level is therefore to provide proper integration of diverse measures, to be taken, so that they will mutually support each other. In some cases, it will be

necessary to make a choice, notably when interests of one kind do not harmonise with other interests. The conflict between the interests of physical planning and other considerations must then be assessed against the background of general policy which incorporates the various sectors in an inter-related framework.

Proper co-ordination on a national level benefits greatly from the work of various official co-ordinating institutions. The question arises how the responsibility of each individual Minister can be reconciled with the need for an effective national planning policy. In the new law on physical planning an attempt has been made to find a solution to this problem.

Administrative co-ordination, however, can never be decisive. Decisions are the prerogative of Ministers, or, where necessary, of the Cabinet. The connection between the big issues which have lately come under review have stressed this aspect. Under the previous Cabinet already, it was felt that a more permanent form of consultation within the Government on these problems was needed. This was achieved by the institution, in 1958, of the Cabinet Council for Physical Planning. Under the direction of the Prime Minister, the Council consists of the Ministers of the Interior, Finance, Housing and Building, Transport and Waterstaat, Economic Affairs, and Agriculture and Fisheries, while each of the other Ministers is entitled to attend the meetings of the Council, if he so desires.

The Cabinet also regards the Council for Physical Planning as the obvious body to ensure the necessary cohesion in matters of physical development. Therefore it is intended to associate the Council regularly with the main outlines of official planning policy. A common background will thus be evolved, against which each Minister will work out his own policy for the sector for which he is responsible, and against which also the policy of the lower public authorities can be worked out.

3. General policy trends

The general basis of the Government's policy is, that in their opinion, the physical development of the Netherlands should be directed, so far as possible, along the lines set out above.

The Government regards this policy as a national concept, purporting to promote optimum living and working conditions in all parts of the country. This should be interpreted in the non-material as well as in the material sense. Conditions in the Netherlands make it imperative to work vigorously for the highest possible return on our natural resources, and in general for the greatest possible economic potential. The non-measurable aspects of physical planning, however, should not be valued less highly. The policy adopted, therefore, will also endeavour to provide the greatest possible part of the population with attractive living conditions, to avoid unnecessary loss of leisure time, to offer good and easily accessible opportunities for recreation in the countryside and for sports etc., and to facilitate participation in the social and cultural life of the country.

It is clear from the preceding comments, that a policy of this kind must take the form of a policy for distribution, pursued in the common interest of the developing

Dutch metropolis - the "Randstad Holland" *) - and of the areas outside. The latter are involved in the development in diverse ways: the greatest efforts will have to be made in the problem areas, the greatest possibilities to absorb extra population will probably be found in the non-problem areas. In view of this, the policy will have to be broken down into three parts:

- a. further development of the Randstad itself in the interests of the specific functions of this area;
- b. stimulation of the problem areas;
- c. promotion of greater absorption of population in the other areas outside the Randstad Holland.

In all aspects of this policy, measures of stimulation and measures of a selective nature will have to supplement and support each other. It is, however, clear that the selective measures will be more prevalent in the West with its concentrated population than in the areas outside the Randstad which have fewer planning problems, although even here they must play a part. Regional concentration in well-equipped development centres, in particular, cannot be achieved without selective measures.

Both stimulation and selection should be achieved, so far as possible, by measures of a positive kind. Where possible, the Government would like to avoid prohibitive measures. In this respect, therefore, it goes less far than in some other countries.

In the United Kingdom, the efforts at de-congestion constitute an important part of physical planning policy. The means employed, apart from the ambitious enterprise of building new towns outside the great agglomerations, consist mainly of various facilities afforded to industries, if they get established in a new town or in a development area. In addition, English legislation provides powers for preventive control of the establishment of plants. Under the Distribution of Industry Act, an industrial development certificate is needed for the construction of new industrial buildings or for major extension of existing plants. The industrial development certificate states that the work to be undertaken is consistent with the Government's distribution of industry policy.

In France too, the development of the regional economies (partly as a means to curb the excessive growth of the Parisian agglomeration) occupies a central place in the Government policy of "aménagement du territoire" **). As in England, the policy is to further the desired distribution of economic activities by offering incentives as regards industrial sites, construction of houses, etc., and also by direct facilities to industrial enterprises (e.g. a special "prime d'équipement"). In addition, there is an

*) A number of physically separate population centers, which are situated in a horse-shoe-like pattern around an essentially open central area with a diameter of about 30 miles. This complex is situated in the West of the country and has a combined population of 4.2 million.

**) The leading ideas of this policy were already set out in 1950 by the then Minister Claudius Petit in a memorandum "Pour un plan national d'aménagement du territoire".

extensive system of permits for the construction of new, or the extension of existing, industrial buildings in areas which are designated by decree (at present especially the Paris agglomeration), and also for the establishment or extension of Government or semi-Government institutions in this agglomeration.

When comparing these foreign regulations with the proposed Dutch system, it should be remembered that those countries have to cope with much more serious forms of congestion. The growth of the major cities, both in the United Kingdom and in France, has given rise to situations which made the use of prohibitive measures virtually unavoidable. In the Netherlands, difficulties of this kind occur only in exceptional cases, and even then on a much smaller scale, for example, in the Gooi region. At the present stage of the concentration problem in the Netherlands, it is still possible, however, to make a successful attempt at preventing the development of situations such as exist in the English and French cities. For this reason, the Government does not deem it necessary, on the whole, to apply restrictive measures in this field.

This preference for positive over restrictive measures does not detract from the function of the development plans. Even if the choice of location is free, orderly development within the location area must be ensured. This means that practically everywhere one kind of use has to be weighed, as to situation and area, against another, within the framework of the whole development; for example, industry as against agriculture or horticulture, recreation, water works, etc. Inter-relationships also make demands, e.g. to secure easier accessibility, prevention of air pollution, preservation of buffer zones, etc. The result of development plans, will frequently be that the entrepreneur cannot find everywhere industrial sites of the kind, size or location that he would wish.

4. Further analysis of the measures to be taken

The Government is conscious of the fact that the success of this policy, which aims at some diversion of the existing trend of development towards a wider distribution, cannot be guaranteed in advance, and that, in any case, its effects will not be apparent for a long time. Even if linked to existing tendencies, no spectacular results may be expected in the short run.

Furthermore, the success of this policy does not depend exclusively on the Government. In a free society, physical planning can be really effective only as an interaction between the activities of the Government and the natural forces in society. The part to be played by the Government might roughly be described as:

- a. indicating the general lines along which the development of the country should move;
- b. assistance in creating favourable conditions for this development by the execution of public works; the choice of location of public services, educational and other public institutions; measures taken in the social and cultural field; etc.;

- c. drawing up special measures to promote the desired development;
- d. where necessary and possible, incorporating the expected developments into regional and local development plans, partly as a guarantee for the rights of the citizens.

5. Measures to be taken by the Central Government

A. The creation of favourable conditions for development

On the national level, the Government will continue its endeavours to take the interests of physical planning into account when decisions are being made on the general design, priority, and execution, of large Government projects.

Of the large projects currently in execution, it may be said that on the whole they fit in very well with the policy expounded above. It is precisely these large projects - Zuyderzee works, Delta works, the continuing extension and improvement of the network of motorways - which provide the primary conditions for the stimulation of formerly peripheral areas. In this connection, the function of recreation should also be mentioned, as it may be decisive for the development of backward areas.

On the regional level, measures should tend mainly towards effective equipment of the regions involved. A primary part of this is, of course, the opening up of the area itself to transport. Since the war, and until the 1st January 1960, 597 km (370 miles) of new main roads (19 % of the total) have been constructed.

In continuing the policy of improving regional accessibility, it will be necessary to link up with a well-designed network of service centres, which in its conception and interrelationship is properly adjusted to modern conditions of transport and public utilities. These centres must also be the focal points for the improvement of living conditions and social and cultural services.

In 1959, a number of development centres (18) and secondary centres (26) have been designated - in the problem areas, with a view to the distribution of industry. The idea was that the policy proper would be applied mainly to the first category, while the designation of secondary centres was meant principally as a transitional measure. The centres are shown in Exh. 20.

Seen from the point of view of effective concentration, the large number of centres and secondary centres in the North is striking. It does not seem possible to associate all of them with a vigorous policy aimed at the improvement of the whole location problem. This would only tend to split up the available resources without guaranteeing an improvement in keeping with the seriousness of the problem. In taking steps to improve the equipment of the centres, the Government therefore deems it more useful to concentrate on a cumulative effect in those centres which are likely to be most successful. From there, the development may be expected to spread into the surrounding areas.

The Government intends to pay continuous attention to the distributive aspect of housing policy. Specific measures will be considered, if the supply of dwellings, from the point of view of quantity or of quality, falls behind the regional development of



Fig. 20

employment opportunities. In view of this, a given number of houses has been reserved, already in 1960, especially for the industrial development of the problem areas; a similar measure will be taken for 1961 too. The new Premium Regulation, introduced in 1960, furthermore, makes it possible to take account of the most desirable distribution when granting premiums for house building.

A very important contribution to the improvement of location conditions can be made by the educational sector, in particular by establishing institutions of secondary and technical education, and - to a lesser degree - institutions of higher education. Particularly since the war, considerable progress has been made in most of these sectors, and for the greater part it has led to a better distribution of these institutions over the country as a whole.

The Ministry of Education is already paying special attention to the distribution of these schools.

When creating favourable conditions of development, the stress is not only on the proper equipment of the development areas and centres, but also - and even more so - on the attitudes of the population involved towards the changes in their situation.

An important part is therefore played by information services of all kinds: agricultural and social information, which will acquaint the population with the possibilities open to young people in and outside agriculture; information about training, about occupations, vocational advice, etc.

By consultation and social planning the population is prepared for the changes and encouraged to initiate the necessary improvements of the social and cultural amenities in their area. This implies that social planning is not exclusively the concern of the Government, but very much the affair of the local population itself, individually and in groups.

In addition to advice on schools and occupations, youth organisation and popular education, provisions for the use of leisure time and for recreation, care of social and spiritual health, and also individual social work and community development, are important in this respect.

The classification of municipalities may also influence the distribution of industry to some extent, although it has not been proved that a lower category of municipality, with accompanying lower wage level, will provide a definite advantage with respect to industrial location, and will therefore exercise a favourable influence on the relocation of industries. Usually, this is true only in the first stage of industrialisation. In later stages, high wages are decisive for the attraction of skilled workers and workers in the services sector.

B. Special measures

The most important of these measures concerns the distribution of industrialisation and is laid down in the Premium and Price Reduction Regulation of 1959 to the extent of another fl. 19 million. The experience obtained since then is encouraging, and it

also indicates that on the whole premiums and price reductions have been appropriately determined.

Further, a long-term plan has been drawn up for the improvement of the infrastructure of the problem areas. The plan has been prepared by a new co-ordination committee; the Committee for Industrial Development of Problem Areas. The task of this Committee is to advise the Minister of Economic Affairs on the most useful ways of spending the grants to lower public authorities for the purpose of improvement of the infrastructure.

On the basis of this long-term plan, an amount of fl. 130 million will be allocated, in the 1960-1964 period, on the budget of the Ministry of Economic Affairs for subsidizing the execution of public works which are important for the industrial development of the problem areas. This amount does not include the cost of advanced or speedier execution of main road construction and of other Government projects which are of interest to these areas. For this purpose, fl. 60 million will be allocated, in the 1960-1964 period, on the budget of the Ministry of Transport and Waterstaat.

In 1960, fl. 2.5 million were made available for Government support to projects of lower public authorities concerned with tourism and recreation in the problem areas. In the 1961 budget, the Ministry of Economic Affairs has again allocated fl. 2.5 million for this purpose.

Since April 1960, the Migration Regulation and the training facilities of the Ministry of Social Affairs and Health, have been better adapted to the present industrialisation policy. In the former regulation, a distinction is made between three areas: the West, the problem areas, and the other areas. Under the new regulation, subsidies are no longer granted for migration to the Randstad Holland. Some support is given to migration to non-problem areas. The greatest attention, however, is paid to migration to the selected centres in the problem areas.

Within the limits of its general policy of concentration of effort, set out above, the Government intends to set the example in the promotion of social, cultural and recreational amenities (village halls, reading rooms and libraries, amenities for sport and recreation, theatres and concert halls, etc.). The cost involved is spread over several departments, and is co-ordinated, so far as it concerns problem areas, by the Interdepartmental Committee for the Problem Areas, whose secretariat is at the Ministry of Social Work. Where social planning is concerned, the Ministry of Economic Affairs and the Government Physical Planning Service have now also been brought into the discussions on the "areas with structural changes". In this way, attention will be paid to the function of social policy, in the light of concrete problems which may arise from regional planning and economic policy.

C. Co-ordinated development plans

Government activities bearing on regional development, in particular that of the problem areas, are spread over a number of departments, whose efforts at co-ordination

follow different paths. The previous Cabinet - following up earlier requests - has therefore asked the Standing Committee of the Government Physical Planning Service to draw up a co-ordinated system of measures, based on consultations with the various departments and, where necessary, with the provincial and municipal authorities concerned. The resulting report should state in what way the development of the areas involved can best be assisted.

6. Policy concerning the lower public authorities

The rough outlines of the plan for physical development of the Netherlands will have to be refined and worked out regionally, and will be realised, mainly, on a local level. This is in keeping with the existing, as well as with the proposed, legislation on matters of physical planning.

The provincial governments are the authorities responsible for regional policy. In the Netherlands, the provinces are, in fact, important centres of co-ordination, for whereas the adoption of regional plans and the approval of local development plans is the prerogative of the provincial authorities, they also deal with other matters of regional development (provincial water works, land consolidation, community development, etc.). The adoption and revision of regional plans will enable them to fit the measures to be taken regionally into a comprehensive framework of physical planning, and at the same time to provide a general background for municipal policy.

Especially now that further development must be accompanied by more concentration, regional planning, gains significance and provincial authorities - sometimes working on an interprovincial level - have an important task allotted to them.

For the application of the development policy to the life of the population, the municipal development plans are of primary importance. Even now, regional plans have no direct legal force for the citizen; only through municipal development plans will they become legally operative. In the new legislation proposed, this principle is carried even further: only the municipal development plans are binding. The sanctions to secure observance of the plan are, and will be, left to the municipal governments, apart from the exceptional procedure, laid down in the temporary Act of 20th November 1950, by which the Minister of Housing and Building can veto the carrying out of any work contrary to a plan.

Under present legislation, the local development plans, the regional plans and the national plan form an hierarchical system, through which the views of the higher authorities can be expressed. The draft bill on physical planning provides for this by allowing the Central Government or the provincial authorities to give directives. This is supplemented by the possibility, introduced by amendment, of preventive control by the provincial government on the granting of building and installation permits, if they affect wider than municipal interests.

The policy of municipal governments is important, not only because of their duties in connection with development plans, but also because of the influence which they may exercise on the supply and allocation of sites. In concentration areas, it is

already normal practice for the municipal authorities to pursue an imaginative land policy. It will now be necessary to do the same in the areas whose development has been speeded up, so that the necessary living space, industrial sites, recreation grounds, etc. will be available in good time.

In the Randstad Holland a new element will have to be introduced into land policy, i. e. a policy of selective allocation. This applies mainly to industrial sites on deep water, which are in short supply and which usually cannot be made available, in the same conditions, outside the West; but even apart from this, there is good cause to exercise care in the allocation of industrial and commercial sites within the Randstad. Selection of the applicants will be necessary, and the shorter the supply of these sites, the stricter the selection should be. The fixing of prices, furthermore, is very important.

It would be desirable to include in the price of industrial sites not only the cost of acquisition and construction plus loss of interest involved, but also as much as possible of the extra Government expenditure, caused by concentration of enterprises in large centres of population.

It is, in fact, because the land market in the Randstad is mainly dominated by the municipalities, that co-operation in this field is essential for a successful policy of industrial distribution. The Government intends to consider, after consultation with the provincial governments, whether further provisions are desirable and possible in this respect.

In view of the above, it is satisfactory to note that provincial and municipal governments show great interest in physical planning problems. We may therefore confidently expect that these bodies will show necessary activity both within and outside the development plans. In this connection, it is particularly important that matters should be considered, when necessary, within a wider framework. On the provincial level, this is achieved by means of interprovincial contact; this happens, for example, in the North and in the Delta area. On the municipal level, the establishment of industrial and recreational boards and similar bodies has contributed to the necessary co-operation. In this way it is possible to have the great advantages of wide administrative decentralisation without the disadvantages that occur when excessive importance is attached to interests with a limited scope.

Meanwhile, new administrative measures cannot altogether be avoided.

In other parts of the country too, the existence of many small municipalities causes planning, as well as administrative problems.

On January 1st, 1959, the number of municipalities amounted to 994. Over half of this number, that is, 566 municipalities, had less than 5,000 inhabitants; 246 municipalities had less than 2,000, and 99 municipalities had less than 1,000 inhabitants. Whether or not the administration of these small municipalities conforms to reasonable standards of efficiency should be judged from a wider point of view than that of local interests; for in particular in rural areas, physical planning will have to

be realised on a regional basis, and as a rule the functions of small municipalities will be sub-ordinated to those of the region to which they belong. In some small municipalities, this may lead to problems which are beyond their capacities, and which cannot be solved along the lines laid down in the Act on Combined Regulations; it will then be necessary to decide whether maintenance of their municipal independence is justified, as it weakens the impact of municipal administration in the region to which they belong.

Several municipalities, in particular of the medium-large kind, are in difficulties as a result of lack of space.

Now that the majority show a rapid growth of population, it is obvious that in due course a good number of them will feel restricted within their boundaries. It would be contrary to the interests of purposeful and responsible physical planning, to postpone the study of the development possibilities of those municipalities until that stage had been reached.

Growing medium-large municipalities therefore must arrange in good time that the land needed for development should be available, by means of adjustment of the boundaries. It would not be good policy to demand that the urban municipality should use up all its spare land before boundary adjustment is considered, for cities, too, should dispose of an ample land reserve, so as to have some choice when developments are needed.

The policy expounded above in respect of small and rapidly growing, mainly medium-large municipalities, is followed by the Minister of the Interior in the general revision of municipal boundaries. It may be expected that provincial governments also will be active in this matter, and that as a result of this policy the necessary proposals will in due course reach Parliament.

Apart from their administrative classification, the financial position of the lower organs of government is also very important, for they will be able to play the part allotted to them only if they possess adequate financial resources. Provision should therefore be made for sufficient grants to lower government organs, either by means of special grants from the Central Government towards the cost of selected projects and activities, or by way of the general financial arrangements between the Central Government and the provinces and municipalities. A bill introduced in the Second Chamber incorporates the possibility, in the case of a general grant, of taking account of special circumstances (e.g. situation in a problem area). When introducing this bill the Government has notified its intention of strengthening the Municipal Fund by a modification of the percentage allocated to the Fund out of the proceeds from Central Government taxes. Of the total increase of fl. 50 million, fl. 7.5 million is earmarked for the increase of general municipal funds in the problem areas.

7. Summary of the programme

The Netherlands is a small, densely populated country situated on the Rhine delta amidst the largest concentration of cities and industry in Europe. One of those con-

centrations is established within the country itself - the Randstad Holland - and a large part of the Netherlands, moreover, lies within the sphere of influence of the Rhine-Ruhr area and of the large Belgo-French agglomerations.

The physical development of the country is dominated, to a great extent, by its function as a "gateway" in the traffic between Western Europe and the world oceans. As the European economy expands, this situation will further strengthen the existing concentration in the West of the Country. In the surrounding countries too, the large conurbations are expanding vigorously. Largely under their influence, the South and East Netherlands in particular are increasingly involved in industrialisation and urbanisation. Development in the Netherlands is thus to be regarded as part of a much larger process, by which urban agglomerations with a combined population of about 20 million inhabitants are expanding towards each other.

This prospect creates special problems in the field of recreation, even though in the long run some bad agricultural land will undoubtedly be transferred to recreational purposes.

The problem of physical planning in the Netherlands is further complicated by the rapid growth of population in the country as a whole, and by the rather large differences in development in the separate regions. In 1980, the total population is expected to reach 14 million, or even more. If present tendencies were to develop unchecked, about 6.5 million would be absorbed by the West. Outside the West, the prospects vary between regions where industrialisation has been already established (South and East), and regions which are in the main still agricultural (North and South-West).

The problems arising from high concentration and threatening congestion, on the one hand, and from lagging development, on the other, demand a national policy of physical planning, tending to promote optimum living and working conditions in all parts of the country. Prevention of excessive congestion in the Randstad Holland, and preservation of the typical functions of the West can be combined, in this policy, with the raising of the level of development in areas with lagging development. The policy therefore is to aim at a more harmonious distribution of employment - and thus of population - over the country.

One aspect of this policy is, to guide existing trends of development into proper channels. In addition, deliberate measures are needed to achieve a better balance between the various parts of the country. Modern technical developments in transport, energy supply, tele-communication, etc., and the clearly emerging tendencies towards more decentralised development, lend support to this. The effect becomes increasingly apparent in the changing picture of internal migration: the immigration surplus of the West is falling off; conversely, the South now shows an immigration surplus, balance is reached in the East, and the expulsion of population from the problem areas in the North and South-West is decreasing. As agriculture will continue to lose people, these movements are primarily determined by the distribution of development in industry and the services sector.

In view of this, the national policy must be broken down into three parts:

- a. further development of the Randstad in the interests of the specific functions of this area;
- b. stimulation of problem areas;
- c. encouragement of greater absorption of population in the other areas outside the Randstad Holland.

aspects:

In order to materialize this policy attention should be devoted to the following

1. Working areas

- a. continued development of well-equipped rural areas, where efficient agricultural production is possible;
- b. continued improvement of the physical planning conditions for the benefit of establishments which are dependent, for their location, on the Randstad Holland, in particular in the industrial and services sectors;
- c. a better national distribution of the other working areas in these sectors, keeping in mind the necessity of effective regional concentration.

2. Dwelling areas

- a. encouragement of the development of well-designed and sufficiently spacious urban development plans;
- b. development of suitably selected sites within the sphere of influence of the large towns for country-dwelling;
- c. preservation of a balanced structure of the Randstad by maintaining the historic cities on the Ring as geographically separate centres of gravity, and also by encouraging outward expansion;
- d. promotion of an effective network of settlements which will ensure a reasonable standard of services (economic, social and cultural) also in rural areas;

3. Transport

Early adaptation, nationally and regionally, of the system of inland transport and waterways to the desired development of the country; particularly for stimulating the development of selected areas and centres.

4. Recreation areas

- a. preservation and development of well-equipped recreation regions (also for recreation on the water), with special attention to the few coherent recreation areas of large dimensions;
- b. creation of new, large-scale opportunities for the recreation of the city dwellers in or near the places where they live; e.g. in the "buffer zones" of the Randstad;
- c. provision of amenities for active recreation (sports, etc.).

In many respects, this development is already in progress. It needs time and money, however, and its success by no means depends on the Government alone. Interaction between the activities of the Government and the forces within society itself is necessary. Within the Government sphere, the provinces and municipalities, in their turn, have to play an important part in all this. In pursuing its general policy, the Central Government itself will also continue, however, to pay attention to the aspects mentioned above.

The programme of the Government may be summarized as follows:

1. Proper co-ordination on Central Government level

Through regular meetings of the Council for Physical Planning, the Government will aim at greater cohesion and clearer direction in its physical planning policy, including the preparatory committee stages.

2. Creation of favourable conditions for the desired development

The Government will contribute to this, by paying close attention to the aims of physical planning enumerated above, when decisions are being made on the general design, priority and execution of projects involving Central Government finance.

This applies in particular to:

- a. the big hydraulic engineering projects: Zuiderzee works and Delta plan;
- b. projects for improvement of the infrastructure;
- c. housing policy, in particular by adjusting the quality and quantity of the housing supply to the development desired from the point of view of physical planning;
- d. projects for improvement of the physical structure of rural areas (land consolidation and other agricultural engineering matters);
- e. the creation, or preservation, of recreation amenities; for example, by regular inclusion of this item in the execution of public projects whenever possible; and, as regards areas for military use, by trying to find a solution which will ease the pressure on the recreation areas.

In addition to the measures concerning the execution of public works, the Government will continue to further the planned development by encouraging proper information and advice, training, etc. for the population concerned.

3. Special measures

In this respect, the Government will carry on as before with its decentralizing policy.

This particularly refers to:

- a. the Premium and Price Reduction Regulation for industrialisation in the problem areas;

- b. the extra efforts to speed up, or to advance, the execution of projects sponsored by the Department of Transport and Waterstaat for the purpose of promoting industrialisation in problem areas;
 - c. the contributions to lower public authorities for the improvement of the infrastructure in the interests of industrialisation, and for projects concerned with tourism and recreation;
 - d. the facilities for migration and training;
 - e. the contributions to lower public authorities and to private institutions in the field of social, cultural and recreational amenities;
 - f. the measures favouring the development of a satisfactory social and cultural structure;
- all this while taking into account the general policy of concentration of effort on a limited number of centres.

4. *The amounts involved in the measures taken on behalf of the problem areas, are figured in the budget as follows:*

Premium and Price Reduction Regulation for industrialisation (1961)	f1.
expenditure	20 mln
maximum commitments during 1961	19 mln
Long-term programme for the improvement of the infra-structure (1960-1964)	130 mln
Speedier or advanced execution of projects sponsored by the Department of Transport and Waterstaat (1960-1964)	60 mln
Projects concerning tourism and recreation (1960 and 1961)	
expenditure	3.5 mln
maximum commitments	1.5 mln
Measures concerned with social work, social hygiene, culture, etc. (1960-1963)	13 mln
Measures for the completion of policy in former development areas (1960-1963)	7 mln
Strengthening of the Municipal Fund	7.5 mln
Migration Regulation	0.5 mln
subsidies	0.25 mln
maximum commitments	1.2 mln
Training grants	

5. *Co-ordinated development plans*

The Government will scrutinize existing measures in the light of the co-ordinated development plans to be proposed by the Standing Committee of the Government Physical Planning Service after consultation with the provincial governments.

6. *Policy concerning the lower public authorities*

The Government will further the adoption, or revision, of regional and municipal development plans, in which the main outlines of policy devised by the Central Government will be worked out in greater detail. In this connection, the Government will pay special attention to a proper division of functions between regions and between municipalities, so as to attain a satisfactory degree of concentration. When the new legislation has become effective, directives for the further elaboration of the main outlines of policy may be given.

In consultation with the provincial governments, the Government will also encourage an imaginative land policy in the municipalities in development areas, and an allocation policy in the Randstad, based on the need for a selection of the activities which should be located there.

On the administrative level, and within the framework of the physical planning policy adopted, the Government will

- a. promote the abolishment or combination of too small municipalities where necessary;
- b. promote timely extension of the boundaries of medium-large municipalities which are in difficulties for lack of space for development;
- c. introduce bills providing for special administrative solutions in the larger agglomerations.

7. *Government and society*

So far as possible, the Government will help to stimulate public interest in problems of national physical planning, and promote a useful interaction between ideas conceived by the Central Government and those emerging from society with its various forms of organisation. The Government attaches special value to initiatives taken by private enterprise. For its part, the Government will endeavour to make its contact with private enterprise, through information, study and consultation, as rewarding as possible.

*

APPENDIX I

Births, deaths, infant mortality and net reproduction rates in a number of countries

Country	Births rate		Deaths rate		Infant deaths per 1000 Infants < 1 year		Net repro- duction rate
	1930/34	1955/57	1930/34	1955/57	1930/34	1955/57	
Belgium	17,6	16,9	13,2	12,1	91,6	38,4	1029 (1952)
Denmark	17,9	17,1	10,8	9,-	73,1	24,5	1142 (1953)
West-Germany	16,3	16,5	11,0	11,2	77,8	38,9	0927 (1952)
Greet-Britain	15,8	16,-	12,2	11,6	65,5	24,7	1118 (1952)
Italy	24,5	18,1	14,1	9,9	105,6	49,8	-
Luxembourg	18,1	15,8	12,7	11,9	88,1	38,1	-
Austria	15,1	16,4	13,5	12,5	100,2	44,4	0911 (1951)
Sweden	14,4	14,7	11,7	9,7	51,9	17,4	1021 (1951)
Switzerland	16,7	17,4	11,7	10,1	49,0	25,1	1145 (1952)
Finland	20,0	20,7	13,6	9,2	73,9	27,7	1387 (1952)
France	17,2	18,6	15,9	12,3	80,1	36,2	1249 (1952)
Greece	30,2	19,4	16,8	7,3	118,9	42,4	-
Ireland	19,5	21,1	14,1	12,1	67,5	35,1	1381 (1950-1952)
Netherlands	21,7	21,3	9,0	7,6	46,7	18,8	1386 (1953)
Norway	15,7	18,4	10,4	8,6	45,2	20,7	1174 (1952)
Portugal	29,3	23,5	16,9	11,6	144,7	88,7	1086 (1951)
Spain	27,5	21,1	16,5	9,8	118,-	53,9	-
Yugoslavia	33,0	25,5	18,4	11,1	154,9	104,3	1421 (1953)
Australia	17,6	22,7	8,8	8,9	42,9	21,7	1468 (1952)
Canada	22,2	28,2	10,0	8,2	79,6	31,4	-
United States	17,6	24,8	11,0	9,4	60,4	26,2	1519 (1951)

Source: Demographic Yearbook (1957)

APPENDIX II

Size and structure of population in a number of European countries, in 1971

Country	Total population in 1971		Population of working age		Number of young people under 15		Number of old people: men of 65 and over, women of 60 and over	
	mln 1951 = 100		mln 1951 = 100		per 1000 persons of 15-64 (59) years old			
					1951	1971	1951	1971
Belgium	a	9,2 106	5,6 100		322	319	210	285
Denmark	a	4,9 115	3,0 114		422	387	181	234
West-Germany	a	51,0 107	31,6 102		363	331	184	283
	b	52,9 111	32,9 106		363	328	184	281
France	a	46,0 109	28,2 106		357	413	224	253
Greece	a	9,8 123	6,3 130		506	365	142	193
Great-Britain	a	53,4 106	33,4 103		350	316	212	281
	b	52,9 105	33,1 102		350	316	212	283
Ireland	a	3,7 124	2,2 128		494	482	218	185
	b	2,9 99	1,7 98		494	479	218	240
Italy	a	53,6 115	34,4 116		411	353	162	203
	b	51,9 111	33,2 112		411	354	162	211
Luxembourg	a	0,3 98	0,2 92		290	290	176	281
Netherlands	a	12,9 127	8,0 129		483	423	159	198
	b	12,4 122	7,6 123		483	420	159	205
Norway	a	3,9 118	2,3 112		384	399	185	261
Austria	a	7,0 101	4,3 98		358	324	211	292
Portugal	a	10,7 127	6,6 127		480	466	146	171
	b	9,8 116	5,9 114		480	468	146	190
Sweden	a	7,6 107	4,8 107		366	309	199	262
Switzerland	a	5,2 110	3,2 107		365	331	186	266

a = excluding migration balance

b = including migration balance

Source: O.E.E.C., Demographic Trends in Western Europe, 1951-1971 (1956).